CRYSTAL STRUCUTRE OF KETOPANTOATE HYDROXYMETHYLTRANSFERASE

Field of the Invention

The present invention relates to the enzyme ketopantoate hydroxymethyltransferase (KPHMT), and in particular its crystal structure and the use of this structure in drug discovery.

Background of the Invention

Pantothenic acid (vitamin B_5) is found in coenzyme A (CoA) and the acyl carrier protein (ACP), both of which are involved in fatty acid metabolism.

Pantothenic acid can be synthesised by plants and microorganisms but animals are apparently unable to make the vitamin, and require it in their diet. However, all organisms are able to convert pantothenic acid to its metabolically active form, coenzyme A.

The pathway for the synthesis of pantothenic acid is shown in Figure 1. It provides a potential target for the treatment of infectious disease, since inhibitors of the pathway should be damaging to bacteria and fungi but not to human or animal subjects infected by such microorganisms.

Of specific interest is ketopantoate hydroxymethyl-transferase (KPHMT (SEQ ID NOs: 7-11, for example); 5,10-methylenetetrahydrofolate: α-ketoisovalerate hydroxymethyl transferase, EC 2.1.2.11). Powers *et al.* (1) showed that KPHMT (SEQ ID NOs: 7-11, for example) is a class II aldolase that utilizes 5,10-CH_2-H_4folate (mTHF) to transfer a hydroxymethyl group to α-ketoisovalerate (α-KIVA) and thereby form ketopantoate, as shown in Figure 2. This is the first step in pantothenic acid biosynthesis. Inhibitors (whether competitive, non-competitive, uncompetitive or irreversible) of KPHMT (SEQ ID NOs: 7-11, for example) would be of significant technical and commercial interest.

KPHMT (SEQ ID NOs: 7-11, for example) from *Escherichia coli* has been cloned and over-expressed in *E. coli.*, and was the

first sequence of a pantothenate enzyme to be determined (2).
The recombinant protein has 264 amino acids, corresponding to a
molecular weight of 28,237 Da. The oligomeric state of the
enzyme appears to be organism specific. The homologue from the
lower eukaryote, *Aspergillus nidulans,* has been expressed in an
active form in *E. coli* and shown to be an octamer by gel
filtration chromatography (3). However, the *E. coli* enzyme, was
found to be a decamer by sedimentation equilibrium experiments,
gel filtration chromatography and polyacrylamide gel
electrophoresis under native conditions (1).

Very little is known about the mode of action of KPHMT (SEQ
ID NOs: 7-11, for example), except that the addition of the
hydroxymethyl group proceeds with retention of configuration
(4). Mg^{2+} is essential for activity, whilst metal reconstitution
experiments with Mn^{2+}, Co^{2+} and Zn^{2+} give enzyme with
progressively less activity (1). To date, five ketopantoate
auxotrophs, from *E. coli.*, *A. nidulans*, *Daturia innoxia* and two
from *Salmonella typhymurium*, have been identified (5)(6). Four
of these (from *E. coli, A. nidulans*, and the two from *Salmonella
typhymurium*) have been shown to have defects in the *panB* gene
which encodes KPHMT (SEQ ID NOs: 7-11, for example). The fifth
(from the plant, *D. innoxia*) is suspected to have a *panB* defect
(6). The *A. nidulans* auxotroph is caused by a deletion of Gly
168 (corresponding to Gly 205 in *E. coli*).

Until now no one has successfully determined the structure
of KPHMT (SEQ ID NOs: 7-11, for example). This has prevented
KPHMT (SEQ ID NOs: 7-11, for example) inhibitors being developed
via structure-based drug design methodologies. Therefore,
knowledge of the structure of KPHMT (SEQ ID NOs: 7-11, for
example) would significantly assist the rational design of novel
therapeutics based on KPHMT (SEQ ID NOs: 7-11, for example)
inhibitors.

Definitions

In the following by "binding site" we mean a site (such as an atom, a functional group of an amino acid residue or a plurality of such atoms and/or groups) in a KPHMT (SEQ ID NOs: 7-11, for example) binding cavity which may bind to an agent compound such as a candidate inhibitor. Depending on the particular molecule in the cavity, sites may exhibit attractive or repulsive binding interactions, brought about by charge, steric considerations and the like.

By "fitting", is meant determining by automatic, or semi-automatic means, interactions between one or more atoms of an agent molecule and one or more atoms or binding sites of the KPHMT (SEQ ID NOs: 7-11, for example), and calculating the extent to which such interactions are stable. Various computer-based methods for fitting are described further herein.

By "root mean square deviation" we mean the square root of the arithmetic mean of the squares of the deviations from the mean.

By a "computer system" we mean the hardware means, software means and data storage means used to analyse atomic coordinate data. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means and data storage means. Desirably a monitor is provided to visualise structure data. The data storage means may be RAM or means for accessing computer readable media of the invention. Examples of such systems are microcomputer workstations available from Silicon Graphics Incorporated and Sun Microsystems running Unix based, Windows NT or IBM OS/2 operating systems.

By "computer readable media" we mean any media which can be read and accessed directly by a computer e.g. so that the media is suitable for use in the above-mentioned computer system. Such media include, but are not limited to: magnetic storage media such as floppy discs, hard disc storage medium and magnetic tape; optical storage media such as optical discs or

CD-ROM; electrical storage media such as RAM and ROM; and
hybrids of these categories such as magnetic/optical storage
media.

Summary of the Invention

The present invention is at least partly based on
overcoming several technical hurdles: we have (i) produced KPHMT
(SEQ ID NOs: 7-11, for example) crystals of suitable quality,
including crystals of selenium atom KPHMT (SEQ ID NOs: 7-11, for
example) derivatives, for performing X-ray diffraction analyses,
(ii) collected X-ray diffraction data from the crystals, (iii)
determined the three-dimensional structure of KPHMT (SEQ ID NOs:
7-11, for example), and (iv) identified binding sites on the
enzyme which are likely to be involved in the enzymatic
reaction.

In general aspects, the present invention is concerned with
identifying or obtaining agent compounds (especially inhibitors
of KPHMT (SEQ ID NOs: 7-11, for example)) for modulating KPHMT
(SEQ ID NOs: 7-11, for example) activity, and in preferred
embodiments identifying or obtaining actual agent
compounds/inhibitors. Crystal structure information presented
herein is useful in designing potential inhibitors and modelling
them or their potential interaction with the KPHMT (SEQ ID NOs:
7-11, for example) binding cavity. Potential inhibitors may be
brought into contact with KPHMT (SEQ ID NOs: 7-11, for example)
to test for ability to interact with the KPHMT (SEQ ID NOs: 7-
11, for example) binding cavity. Actual inhibitors may be
identified from among potential inhibitors synthesized following
design and model work performed in silico. An inhibitor
identified using the present invention may be formulated into a
composition, for instance a composition comprising a
pharmaceutically acceptable excipient, and may be used in the
manufacture of a medicament for use in a method of treatment.
These and other aspects and embodiments of the present invention
are discussed below.

In a first aspect, the present invention provides a crystal of KPHMT (SEQ ID NOs: 7-11, for example) having a monoclinic space group $P2_1$, and unit cell dimensions of a = 86.1 Å, b = 157.2 Å, c = 100.2 Å and β = 97.4°, or more generally a = 86.1±0.2 Å, b = 157.2±0.2 Å, c = 100.2±0.2 Å and β = 97.4±0.2°.

We have found that the asymmetric unit of such a crystal corresponds to a KPHMT (SEQ ID NOs: 7-11, for example) decamer which may be thought of as a pentamer of KPHMT (SEQ ID NOs: 7-11, for example) dimers, the dimers being related by a non-crystallographic five-fold axis

Alternatively, or additionally, the crystal may have the three dimensional atomic coordinates of Table 1. An advantageous feature of the structural data according to Table 1 are that they have a high resolution of about 1.8 Å.

The coordinates of Table 1 provide a measure of atomic location in Angstroms, to a first decimal place. The coordinates are a relative set of positions that define a shape in three dimensions, so it is possible that an entirely different set of coordinates having a different origin and/or axes could define a similar or identical shape. Furthermore, varying the relative atomic positions of the atoms of the structure so that the root mean square deviation of the residue backbone atoms (i.e. the nitrogen-carbon-carbon backbone atoms of the protein amino acid residues) is less than 1.5 Å (preferably less than 1.0 Å and more preferably less than 0.5 Å) when superimposed on the coordinates provided in Table 1 for the residue backbone atoms, will generally result in a structure which is substantially the same as the structure of Table 1 in terms of both its structural characteristics and potency for structure-based design of KPHMT (SEQ ID NOs: 7-11, for example) inhibitors. Likewise changing the number and/or positions of the water molecules and/or substrate molecules of Table 1 will not generally affect the potency of the structure for structure-based design of KPHMT (SEQ ID NOs: 7-11, for example) inhibitors. Thus for the purposes described herein as being aspects of the present

invention, it is within the scope of the invention if: the Table 1 coordinates are transposed to a different origin and/or axes; the relative atomic positions of the atoms of the structure are varied so that the root mean square deviation of residue backbone atoms is less than 1.5 Å (preferably less than 1.0 Å and more preferably less than 0.5 Å) when superimposed on the coordinates provided in Table 1 for the residue backbone atoms; and/or the number and/or positions of water molecules and/or substrate molecules is varied. Reference herein to the coordinate data of Table 1 thus includes the coordinate data in which one or more individual values of the Table are varied in this way.

Also, modifications in the KPHMT (SEQ ID NOs: 7-11, for example) crystal structure due to e.g. mutations, additions, substitutions, and/or deletions of amino acid residues (including the deletion of one or more KPHMT (SEQ ID NOs: 7-11, for example) protomers) could account for variations in the KPHMT (SEQ ID NOs: 7-11, for example) atomic coordinates. However, atomic coordinate data of KPHMT (SEQ ID NOs: 7-11, for example) modified so that a ligand that bound to one or more binding sites of KPHMT (SEQ ID NOs: 7-11, for example) would be expected to bind to the corresponding binding sites of the modified KPHMT (SEQ ID NOs: 7-11, for example) are, for the purposes described herein as being aspects of the present invention, also within the scope of the invention. Reference herein to the coordinates of Table 1 thus includes the coordinates modified in this way. Preferably, the modified coordinate data define at least one KPHMT (SEQ ID NOs: 7-11, for example) binding cavity.

In a further aspect, the invention provides a method for crystallizing a selenomethionine KPHMT (SEQ ID NOs: 7-11, for example) derivative which comprises producing KPHMT (SEQ ID NOs: 7-11, for example) by recombinant production in a bacterial host (e.g. *E. coli*) in the presence of selenomethionine, recovering a selenomethionine KPHMT (SEQ ID NOs: 7-11, for example)

derivative from the host and growing crystals from the recovered selenomethionine KPHMT (SEQ ID NOs: 7-11, for example) derivative.

Thus, the selenium atom KPHMT (SEQ ID NOs: 7-11, for example) derivative and KPHMT (SEQ ID NOs: 7-11, for example) produced by crystallising native KPHMT (SEQ ID NOs: 7-11, for example) (see the detailed description below) are provided as crystallised proteins suitable for X-ray diffraction analysis.

The crystals may be grown by any suitable method, e.g. the hanging drop method.

In another aspect, the invention provides a method of analysing a KPHMT (SEQ ID NOs: 7-11, for example)-ligand complex comprising the step of employing (i) X-ray crystallographic diffraction data from the KPHMT (SEQ ID NOs: 7-11, for example)-ligand complex and (ii) a three-dimensional structure of KPHMT (SEQ ID NOs: 7-11, for example) to generate a difference Fourier electron density map of the complex, the three-dimensional structure being defined by atomic coordinate data according to Table 1.

Therefore, KPHMT (SEQ ID NOs: 7-11, for example)-ligand complexes can be crystallised and analysed using X-ray diffraction methods, e.g. according to the approach described by Greer *et al.*, *J. of Medicinal Chemistry*, Vol. 37, (1994), 1035-1054, and difference Fourier electron density maps can be calculated based on X-ray diffraction patterns of soaked or co-crystallised KPHMT (SEQ ID NOs: 7-11, for example) and the solved structure of un-complexed KPHMT (SEQ ID NOs: 7-11, for example). These maps can then be used to determine whether and where a particular ligand binds to KPHMT (SEQ ID NOs: 7-11, for example) and/or changes the conformation of KPHMT (SEQ ID NOs: 7-11, for example).

Electron density maps can be calculated using programs such as those from the CCP4 computing package (Collaborative Computational Project 4. The CCP4 Suite: Programs for Protein Crystallography, *Acta Crystallographica*, D50, (1994), 760-763.).

For map visualisation and model building programs such as *O* (Jones et al., *Acta Crystallograhy*, A47, (1991), 110-119) can be used.

In another aspect, the present invention provides a method for identifying an agent compound (e.g. an inhibitor) which modulates KPHMT (SEQ ID NOs: 7-11, for example) activity, comprising the steps of:

(a) employing three-dimensional atomic coordinate data according to Table 1 to characterise at least a plurality of KPHMT (SEQ ID NOs: 7-11, for example) binding sites;

(b) providing the structure of a candidate agent compound;

(c) fitting the candidate agent compound to the binding sites; and

(d) selecting the candidate agent compound.

Preferably sufficient binding sites are characterised to define a KPHMT (SEQ ID NOs: 7-11, for example) binding cavity.

A plurality (for example two, three or four) of spaced KPHMT (SEQ ID NOs: 7-11, for example) binding sites may be characterised and a plurality of respective compounds designed or selected. The agent compound may then be formed by linking the respective compounds into a larger compound which maintains the relative positions and orientations of the respective compounds at the binding sites. The larger compound may be formed as a real molecule or by computer modelling.

In any event, the determination of the three-dimensional structure of KPHMT (SEQ ID NOs: 7-11, for example) provides a basis for the identification of new and specific ligands for KPHMT (SEQ ID NOs: 7-11, for example) e.g. by computer modelling.

More specifically, a potential modulator of KPHMT (SEQ ID NOs: 7-11, for example) activity can be examined through the use of computer modelling using a docking program such as GRAM, DOCK, or AUTODOCK (see Walters et al., *Drug Discovery Today*, Vol.3, No.4, (1998), 160-178, and Dunbrack et al., *Folding and Design*, 2, (1997), 27-42). This procedure can include computer

fitting of candidate inhibitors to KPHMT (SEQ ID NOs: 7-11, for example) to ascertain how well the shape and the chemical structure of the candidate inhibitor will bind to the enzyme.

Also computer-assisted, manual examination of the binding cavity structure of KPHMT (SEQ ID NOs: 7-11, for example) may be performed. The use of programs such as GRID (Goodford, *J. Med. Chem.*, 28, (1985), 849-857) - a program that determines probable interaction sites between molecules with various functional groups and the enzyme surface - may also be used to analyse the binding cavity to predict partial structures of inhibiting compounds.

Computer programs can be employed to estimate the attraction, repulsion, and steric hindrance of the two binding partners (e.g. the KPHMT (SEQ ID NOs: 7-11, for example) and a candidate inhibitor). Generally the tighter the fit, the fewer the steric hindrances, and the greater the attractive forces, the more potent the potential modulator since these properties are consistent with a tighter binding constant. Furthermore, the more specificity in the design of a potential drug, the more likely it is that the drug will not interact with other proteins as well. This will tend to minimise potential side-effects due to unwanted interactions with other proteins.

In one embodiment a plurality of candidate agent compounds are screened or interrogated for interaction with the binding sites. In one example, step (b) involves providing the structures of the candidate agent compounds, each of which is then fitted in step (c) to computationally screen a database of compounds (such as the Cambridge Structural Database) for interaction with the binding sites. In another example, a 3-D descriptor for the agent compound is derived, the descriptor including e.g. geometric and functional constraints derived from the architecture and chemical nature of the binding cavity. The descriptor may then be used to interrogate the compound database, the identified agent compound being the compound which

matches with the features of the descriptor. In effect, the descriptor is a type of virtual pharmacophore.

Having designed or selected possible binding partners, these can then be screened for activity. Consequently, the method preferably comprises the further steps of:

(e) obtaining or synthesising the candidate agent compound; and

(f) contacting the candidate agent compound with KPHMT (SEQ ID NOs: 7-11, for example) to determine the ability of the candidate agent compound to interact with KPHMT (SEQ ID NOs: 7-11, for example).

In step (e) the candidate agent compound may be contacted with KPHMT (SEQ ID NOs: 7-11, for example) in the presence of a substrate, and typically a buffer, to determine the ability of the candidate agent compound to inhibit KPHMT (SEQ ID NOs: 7-11, for example). The substrate may be e.g., one or both of $5,10$-CH_2-H_4folate, α-ketoisovalerate, or salts thereof. So, for example, an assay mixture for KPHMT (SEQ ID NOs: 7-11, for example) may be produced which comprises the candidate inhibitor, substrate and buffer.

Instead of, or in addition to, performing e.g. a chemical assay, the method may comprise the further steps of:

(e) obtaining or synthesising the candidate agent compound;

(f) forming a complex of KPHMT (SEQ ID NOs: 7-11, for example) and the candidate agent compound; and

(g) analysing (e.g. by the method of an earlier aspect of the invention) said complex by X-ray crystallography or NMR spectroscopy to determine the ability of the candidate agent compound to interact with KPHMT (SEQ ID NOs: 7-11, for example).

Detailed structural information can then be obtained about the binding of the agent compound to KPHMT (SEQ ID NOs: 7-11, for example), and in the light of this information adjustments can be made to the structure or functionality of the compound, e.g. to improve binding to the binding cavity. Steps (e) to (g) may be repeated and re-repeated as necessary. For X-ray

crystallographic analysis, the complex may be formed by crystal soaking or co-crystallisation.

In another aspect, the invention includes a compound which is identified as a modulator of KPHMT (SEQ ID NOs: 7-11, for example) activity by the method of the fourth aspect.

Following identification of an inhibitor compound, it may be manufactured and/or used in the preparation, i.e. manufacture or formulation, of a composition such as a medicament, pharmaceutical composition or drug. These may be administered to individuals.

Thus, the present invention extends in various aspects not only to an inhibitor as provided by the invention, but also a pharmaceutical composition, medicament, drug or other composition comprising such an inhibitor e.g. for treatment (which may include preventative treatment) of disease such as microbial infection; a method comprising administration of such a composition to a patient, e.g. for treatment of disease such as microbial infection; use of such an inhibitor in the manufacture of a composition for administration, e.g. for treatment of disease such as microbial infection; and a method of making a pharmaceutical composition comprising admixing such an inhibitor with a pharmaceutically acceptable excipient, vehicle or carrier, and optionally other ingredients.

In another aspect, the invention relates to a method of determining three dimensional structures of KPHMT (SEQ ID NOs: 7-11, for example) homologues of unknown structure by utilising the structural coordinates of Table 1.

For example, if X-ray crystallographic or NMR spectroscopic data is provided for a KPHMT (SEQ ID NOs: 7-11, for example) homologue of unknown structure, the structure of KPHMT (SEQ ID NOs: 7-11, for example) as defined by Table 1 may be used to interpret that data to provide a likely structure for the KPHMT (SEQ ID NOs: 7-11, for example) homologue by techniques which are well known in the art, e.g. phase modelling in the case of X-ray crystallography.

One embodiment of the method comprises the steps of:

(a) aligning a representation of an amino acid sequence of a KPHMT (SEQ ID NOs: 7-11, for example) homologue of unknown structure with the amino acid sequence of KPHMT (SEQ ID NOs: 7-11, for example) to match homologous regions of the amino acid sequences;

(b) modelling the structure of the matched homologous regions of the KPHMT (SEQ ID NOs: 7-11, for example) of unknown structure on the structure as defined by Table 1 of the corresponding regions of KPHMT (SEQ ID NOs: 7-11, for example); and

(c) determining a conformation (e.g. so that favourable interactions are formed within the KPHMT (SEQ ID NOs: 7-11, for example) of unknown structure and/or so that a low energy conformation is formed) for the KPHMT (SEQ ID NOs: 7-11, for example) of unknown structure which substantially preserves the structure of said matched homologous regions.

The term "homologous regions" describes amino acid residues in two sequences that are identical or have similar (e.g. aliphatic, aromatic, polar, negatively charged, or positively charged) side-chain chemical groups. Identical and similar residues in homologous regions are sometimes described as being respectively "invariant" and "conserved" by those skilled in the art.

Preferably one or all of steps (a) to (c) are performed by computer modelling.

Homology modelling is a technique that is well known to those skilled in the art (see e.g. Greer, *Science*, Vol. 228, (1985), 1055, and Blundell *et al.*, *Eur. J. Biochem*, Vol. 172, (1988), 513).

In general, comparison of amino acid sequences is accomplished by aligning the amino acid sequence of a polypeptide of a known structure with the amino acid sequence of the polypeptide of unknown structure. Amino acids in the sequences are then compared and groups of amino acids that are

homologous are grouped together.   This method detects conserved regions of the polypeptides and accounts for amino acid insertions or deletions.

Homology between amino acid sequences can be determined using commercially available algorithms.   The programs *BLAST*, *gapped BLAST*, *BLASTN* and *PSI-BLAST* (provided by the National Center for Biotechnology Information) are widely used in the art for this purpose, and can align homologous regions of two amino acid sequences.

Once the amino acid sequences of the polypeptides with known and unknown structures are aligned, the structures of the conserved amino acids in a computer representation of the polypeptide with known structure are transferred to the corresponding amino acids of the polypeptide whose structure is unknown.   For example, a tyrosine in the amino acid sequence of known structure may be replaced by a phenylalanine, the corresponding homologous amino acid in the amino acid sequence of unknown structure.

The structures of amino acids located in non-conserved regions may be assigned manually by using standard peptide geometries or by molecular simulation techniques, such as molecular dynamics (7).   The final step in the process is accomplished by refining the entire structure using molecular dynamics and/or energy minimization.

In another aspect, the present invention provides systems, particularly a computer systems, intended to generate structures and/or perform rational drug design for KPHMT (SEQ ID NOs: 7-11, for example), KPHMT (SEQ ID NOs: 7-11, for example)-ligand complexes or KPHMT (SEQ ID NOs: 7-11, for example) homologues, the systems containing either (a) atomic coordinate data according to Table 1, said data defining the three-dimensional structure of KPHMT (SEQ ID NOs: 7-11, for example), or (b) structure factor data for KPHMT (SEQ ID NOs: 7-11, for example), said structure factor data being derivable from the atomic coordinate data of Table 1.

In another aspect, the present invention provides computer readable media with either (a) atomic coordinate data according to Table 1 recorded thereon, said data defining the three-dimensional structure of KPHMT (SEQ ID NOs: 7-11, for example), or (b) structure factor data for KPHMT (SEQ ID NOs: 7-11, for example) recorded thereon, the structure factor data being derivable from the atomic coordinate data of Table 1.

By providing such computer readable media, the atomic coordinate data can be routinely accessed to model KPHMT (SEQ ID NOs: 7-11, for example). For example, RASMOL (Sayle *et al.*, *TIBS*, Vol. 20, (1995), 374) is a publicly available computer software package which allows access and analysis of atomic coordinate data for structure determination and/or rational drug design.

On the other hand, structure factor data, which are derivable from atomic coordinate data (see e.g. Blundell *et al.*, in *Protein Crystallography*, Academic Press, New York, London and San Francisco, (1976)), are particularly useful for calculating e.g. difference Fourier electron density maps.

Brief Description of the Drawings

Figure 1 shows the pathway for the synthesis of pantothenic acid;

Figure 2 shows the chemical reaction between α-KIVA and 5,10-CH_2-H_4folate which is catalysed by KPHMT (SEQ ID NOs: 7-11, for example);

Figures 3a and b show ribbon representations of the decameric structure as viewed respectively along and from the side of the non-crystallographic five-fold axis;

Figures 4a and b show ribbon representations of respectively top and side views of a protomer;

Figure 5 shows a sequence alignment between primary structure among five members of the KPHMT (SEQ ID NOs: 7-11, for example) family and the secondary structure of the *E. coli* enzyme (SEQ ID NOs: 7-12, respectively);

Figure 6 shows a stereo pair wire-frame electron density map of the substrate binding site with a ketopantoate product molecule (KPL) and a metal ion believed to be Mg^{2+} on which the enzyme is dependent for its activity;

Figure 7 shows an electrostatic potential map for a protomer viewed looking towards the opening mouth of the binding cavity;

Figure 8 shows a stereo pair ribbon representation of the KPHMT (SEQ ID NOs: 7-11, for example) binding cavity;

Figure 9 shows a schematic representation of the distorted octahedral binding site for Mg^{2+} in the KPHMT (SEQ ID NOs: 7-11, for example) binding cavity;

Figures 10 and b show respectively side and top view stereo pair ribbon representations of the mouth of the KPHMT (SEQ ID NOS: 7-11, FOR EXAMPLE) binding cavity; and

Figures 11a and b show stereo pair ribbon representations of respectively (a) the binding cavities of a KPHMT (SEQ ID NOs: 7-11, for example) dimer, and (b) the interface between adjacent KPHMT dimers.

Detailed Description of the Invention

The present invention is founded on the determination of the three dimensional atomic structure of KPHMT (SEQ ID NOs: 7-11, for example).

Solving the Crystal Structure

1. Preparation of Recombinant KPHMT (SEQ ID NOs: 7-11, for example) Protein

Cell Growth

3 x 15 mL starting culture of *E-coli* Hfr3000-YA139 cells with the plasmid pCEJ01 containing the clone pAL01 was incubated at 37 °C overnight in LB broth containing ampicillin (50 mg/mL). This was added to 3 litres of LB broth containing ampicillin (50 mg/mL) and IPTG (90 mg/mL) and incubated at 37 °C for 16 h. Selenomethionine (SeMet) protein was over-expressed in media

containing selenomethionine, as well as six other amino acids
(lysine, phenylalanine, threonine, isoleucine, leucine and
valine) whose presence inhibit methionine biosynthesis (8) and
was purified in the same way as the wild type. The cells were
harvested by centrifugation at 10,000 rpm at 4 °C for 30 min.
The wet cell pellet weighed approximately 9 g.

Protein Extraction

The cell pellet was resuspended in 50 mL of 100 mM
phosphate buffer (pH 7) containing 1 mM DTT, 1 mM ethylene-
diaminetetraacetic acid (EDTA) and 1 mM phenylmethyl-
sulphonylfluoride (PMSF). The suspension was sonicated on ice
for 1 s bursts every 3 s for 12 min and the lysate centrifuged
at 12,000 rpm for 30 min. Nucleic acids were removed from the
supernatant by precipitation with 2% protamine sulphate (1 mL/g
of cell pellet) and centrifugation at 12,000 rpm for 30 min.

The protein was precipitated from the supernatant with
ammonium sulphate (25 - 60% saturation) and centrifugation at
12,000 rpm for 30 min. The protein pellet was dissolved in 30 mL
of 100 mM phosphate buffer (pH 7) containing 1 mM DTT and 1 mM
EDTA and dialysed, overnight against 25 mM phosphate buffer (pH
7) containing 1 mM DTT and 1 mM EDTA. The volume of the dialysed
protein was reduced to below 20 mL by ultrafiltration.

Pellets that contained cell debris, 2% protamine sulphate
precipitant and 0 - 25% ammonium sulphate precipitant were
dissolved in a total volume of 30 mL of 100 mM phosphate buffer
(pH 7) containing 1 mM DTT and 1 mM EDTA, pooled and dialysed,
overnight, against 25 mM phosphate buffer (pH 7) containing 1 mM
DTT and 1 mM EDTA. The volume of the dialysed mixture was
reduced to below 20 mL by ultrafiltration and filtered through a
0.2 μm filter. The protein was purified by FPLC.

Hiprep Q XL anion exchange chromatography

The sample, in less than 10 mL, was loaded, using a 10 mL superloop, onto a Hiprep 16/10 Q XL column equilibrated in starting buffer which consisted of 90% buffer A, containing 50 mM potassium phospate buffer (pH 6.9), 1 mM DDT and 1 mM EDTA, and 10% buffer B containing 50 mM potassium phosphate buffer (pH 6.9), 1 mM DDT and 1 mM EDTA and 1 M potassium chloride (KCl). KPHMT (SEQ ID NOs: 7-11, for example) was eluted in a step gradient of 0.1 - 1 M KCl in 12 column volumes   (240 mL) and at a flow rate of 2.5 mL/min. The gradient was shaped as indicated below. KPHMT (SEQ ID NOs: 7-11, for example) eluted in a single peak at about 0.4 M KCl. Eluate fractions were assessed for KPHMT (SEQ ID NOs: 7-11, for example) content by SDS-PAGE. Fractions containing KPHMT (SEQ ID NOs: 7-11, for example) were pooled and dialysed overnight against starting buffer.

Source 15Q anion exchange chromatography

The sample, in less than 10 mL, was loaded, using a 10 mL superloop, onto a Source 15Q XV 16/10 column equilibrated in starting buffer which consisted of 90% buffer A, containing 25 mM potassium phospate buffer (pH 6.9), 1 mM DDT and 1 mM EDTA, and 10% buffer B containing   25 mM potassium phosphate buffer (pH 6.9), 1 mM DDT and 1 mM EDTA and 1 M KCl. KPHMT (SEQ ID NOs: 7-11, for example) was eluted of the Source 15Q XV 16/10 column in the same way it was eluted of the Hiprep 16/10   Q XL column. KPHMT (SEQ ID NOs: 7-11, for example) eluted in a single peak at about 0.4 M potassium chloride.

Eluate fractions were assessed for KPHMT (SEQ ID NOs: 7-11, for example) content by SDS-PAGE. Fractions containing KPHMT (SEQ ID NOs: 7-11, for example) were pooled and dialysed overnight against starting buffer.
KCl gradient used in anion exchange chromatography of KPHMT (SEQ ID NOs: 7-11, for example):

step 1 - 0.1 to 0.4 M KCl (0 - 50 mL)

step 2 - at 0.4 M KCl (50 - 110 mL)

step 3 - 0.4 to 0.5 M KCl (110 - 120 mL)

step 4 - at 0.5 M KCl (120 - 180 mL)

step 5 - 0.5 to 1 M KCl (180 - 190 mL)

step 6 - at 1 M KCl (190 - 240 mL)

Hiload 16/60 superdex 200 pg gel filtration chromatography

Sample was loaded in less than 10 mL onto a Hiload 16/60 superdex 200 pg equilibrated in buffer containing 50 mM potassium phosphate buffer (pH 6.9), 1 mM DDT and 1 mM EDTA. A constant flow rate of 0.5 mL per minute was maintained and 3 mL fractions were collected. Fractions containing KPHMT (SEQ ID NOs: 7-11, for example) were determined by SDS-PAGE, pooled and concentrated by ultrafiltration to greater than 5 mg/mL. 26 mg of protein was obtained from a 3 L cell culture.

2. Protein Crystallisation

The sample of KPHMT (SEQ ID NOs: 7-11, for example) was concentrated to 24 mg/ml in 40 mM of ketopantolactone (KPL; product) and 50 mM HEPES pH 7.4. Diffraction-quality single crystals of KPHMT (SEQ ID NOs: 7-11, for example) were obtained by the hanging-vapor diffusion method at 4 °C. To make a drop, one volume (1.5 µl) of protein solution was placed on a siliconised cover slide, and the equivalent reservoir solution was added at 19 °C. Reservoir solution contained 9% (w/v) PEG 8000, 50 mM NaCitrate (pH 6.8), 50-100 mM Na(CH_3CO_2) and 200 mM NaCl. The plate was sealed within 1 minute and left at 4 °C. After 2 hours the plate was placed into a polystyrene box, then the box was sealed and placed at 19 °C. Single crystals with dimensions of about 0.5 x 0.3 x 0.1 mm appeared within one or two days. These belonged to the monoclinic space group $P2_1$ with cell parameters a = 86.1 Å, b = 157.2 Å, c = 100.2 A and β = 97.4°, and accommodated one decameric enzyme per asymmetric unit, with a solvent content of 49%.

The SeMet KPHMT (SEQ ID NOs: 7-11, for example) crystals, which were prepared in a similar way to native KPHMT (SEQ ID NOs: 7-11, for example) crystals, seldom grew larger than 0.3 mm or thicker than about 30 µm.   The SeMet KPHMT (SEQ ID NOs: 7-11, for example) stock solution contained 2 mM KPL and 10 mM DTT to protect the Se atoms from oxidation.

3. Data Collection

The structure of KPHMT (SEQ ID NOs: 7-11, for example) was solved by the MAD method (9) using the SeMet derivative.   Data to 3.1 Å resolution were collected at 100 K, at three wavelengths on Station 19-ID of the Structural Biology Centre at the Advanced Photon Source of Argonne National Laboratory, Chicago, US.   Crystals of KPHMT (SEQ ID NOs: 7-11, for example) were cryo-protected by a protocol of gradual soaking in the cryo-protectant PEG400.   Each crystal was placed in 20 ml of crystallisation solution, and the concentration of PEG400 was gradually increased to 20% (v/v) in 5% increments.   The soaking time at each PEG400 concentration was a minimum of 15 minutes. At each concentration step, KPL was added to a concentration of 2 mM.   The flash-cooled crystals were used for data collection.

An X-ray fluorescence spectrum was recorded and used to select wavelengths for subsequent MAD data collection.   Data were collected at the Se absorption edge $\lambda e = 0.97939$ Å, the absorption peak $\lambda p = 0.97927$ Å and at remote reference wavelength $\lambda r = 0.9393$ Å. The diffraction data were indexed and integrated using the *D*TREK* suite (10), and reflexions were indexed and integrated using *MOSFLM* (11).   The three data sets were scaled to the remote data-set using *SCALA* (12) and structure-factor amplitudes were calculated using *TRUNCATE* (13). Statistics of the processed data are listed in Table 2.

The native data set was collected to 1.8 Å resolution on Station 19-ID.   A cryo-protectant solution for the native crystals contained 9% PEG8000, 50 mM NaCitrate (pH 6.8), 50-100 mM Na(CH_3CO_2), 200 mM NaCl, and 20% of PEG400.

4. Structure Determination and Refinement

160 out of the 180 Se sites in the asymmetric unit were found with the program *SnB* (14) using direct methods and anomalous difference data of λp SeMet. Data were phased with *SHARP* (15) using all three wavelength data sets, which also revealed two additional Se sites in the residual maps.

Data collected at the remote wavelength were treated as the reference data set and resolution limits of 40 to 2.3 Å were imposed. Experimental values of the anomalous dispersion (f' and f'' in Table 2) estimated from fluorescence spectra were used and refined during analysis. The resulting values are very similar to the theoretical values and are given in Table 2. Experimental phases were improved by solvent flattening using *SOLOMON* (CCP4, 1994), *via* the *SUSHI* graphical user interface (La Fortelle *et al.*, 1997) with a solvent content of 430%. The final electron-density map was easily interpretable and the whole polypeptide chain was assigned based on the initial electron density map.

The polypeptide chain was fitted in the MAD electron density map using program *O* (16). Rounds of maximum likelihood refinement with *REFMAC* (17) were alternated with visual inspection of electron density and manual rebuilding of side chains. Several rounds of simulated annealing with *CNS* (18) were included to refine the position of the main chain properly.

Table 1 provides the atomic coordinates of the final model.

The quality of the final model was assessed from Ramachandran plots and the analysis of the model geometry was carried out with the program *PROCHECK* (19). 10% of the reflections were set aside for R_{free} calculations. The plot indicated that 90.2% of the residues lay in the favourable regions and 9.8% in the allowed regions. The final R and R_{free} factors of the structure for all reflections between 75.0 and 1.8 Å resolutions were 0.229 and 0.263, respectively. The structural model for KPHMT (SEQ ID NOs: 7-11, for example)

consists of a decamer in the asymmetric unit with 2,640 amino residues, 19,830 protein atoms (non-hydrogen), 100 substrate atoms (non-hydrogen), 1,612 water molecules and 10 metal ions. The last cycle of the refinement without NCS-restrains gave a reasonable stereo-chemistry by using 229,076 unique reflections in the range of 75.0 to 1.8 Å resolution. The root mean-square deviation from standard values are 0.006 Å in bond distances (1-2 distance), 1.2° in angle distances (1-3 distance), and 22.1° in dihedral angles (planar 1-4 distance). From a Ramachandran plot the model was considered to exhibit a good stereo-chemistry.

Structural Characterisation

The crystal structure of KPHMT (SEQ ID NOs: 7-11, for example) is based on a decameric asymmetric unit formed by a pentamer of dimers related by a non-crystallographic five-fold axis. Figures 3a and b show ribbon representations of the decameric structure as viewed respectively along and from the side of the non-crystallographic five-fold axis.

The dimensions of the decamer are approximately 100 x 100 x 75 Å. The accessible area of the decamer, 83,200 Å^2, is small considering the surface area for each protomer (i.e. monomer subunit), 10,800 Å^2, while the buried surface of each protomer is 23%. The close packing of the protomers explains the protein's remarkable resistance to denaturation by heat and urea (20). The interface between protomers in each dimeric unit is large (1140 Å^2) and tightly organised, involving 88 (20 hydrophilic and 68 hydrophobic) interactions. However, the interface between protomers in the pentamer is smaller (760 Å^2) and involves only 20 (6 hydrophilic and 14 hydrophobic) interactions. For this reason, we believe that the dimer is the functional unit. This is corroborated by the homologue from *Aspergillus nidulans*, which is an octamer (3).

Each protomer is approximately spherical and has overall dimensions of 50 x 50 x 40 Å. Ribbon representation top and

side views of a protomer are presented in Figures 4c and d. The tertiary structure is an $\alpha_8\beta_8$ (TIM (triose phosphate isomerase) barrel with an extra α-helix located at the base of the β-barrel (21). The barrel consists of eight parallel β-strands surrounded by eight α-helices.

Sequence Alignment

    35 proteins or translated gene-sequences have been identified using a PSI-BLAST search, with high enough similarity to be classified as members of the KPHMT (SEQ ID NOs: 7-11, for example) family (22). The enzyme is found in bacteria, lower eukaryotes (e.g. yeast) and in the plant *Arabidopsis thaliana* but is not found in *Caenorhabditis elegans*, *Drosophila melanogaster* or, as yet, in other higher eukaryotes. This is consistent with the end product of this pathway being a vitamin. We have analyzed the sequences from the 35 members of this family to identify residues important to the mode of action. Correlation between primary structure among five members of the KPHMT (SEQ ID NOs: 7-11, for example) family and the secondary structure of the *E. coli* enzyme is shown in Figure 5 (SEQ ID NOs:7-12, respectively). The consensus sequence, generated by ClustalW (23) with the sequences of the 35 members, highlights that of the 264 residues, 23 residues are invariant while an additional 77 are conserved. Six conserved sequence motifs, at least six residues in length, were also identified. These are [42]LeuValGlyAspSerLeuGlyMet[49] (SEQ ID NO:1), [111]ValLysIleGluGlyGly[116] (SEQ ID NO:2), [135]GlyHisXGlyLeuThrProGln[142] (SEQ ID NO:3) (where X is a hydrophobic residue), [148]GlyGlyTyrLysValGlnGly[154] (SEQ ID NO:4), [200]IleGlyIleGlyAlaGly[205] (SEQ ID NO:5) and [209]AspGlyAsnIleLeuVal[214] (SEQ ID NO:6). The first two of the six motifs contain residues shown in the crystal structure to be involved in binding the ketopantoate (and hence the substrate) or metal ion.

    Deletion of residue Gly 168 (which corresponds to Gly 205 in the fifth motif given above) in *A. nidulans* has been shown to

prevent cell growth   (3).   This residue is invariant in 34 out
of the 35 KPHMT (SEQ ID NOs: 7-11, for example) sequences and
mutated to serine in a potentially inactive isoform from
Pseudomonas aeruginosa.   Thus, the motif may be required for
correct folding of the protein.

Substrate Binding Site

The substrate binding site is located in a large cavity at
the protein C-terminus ends of the β-strands.   The cavity
extends almost one quarter the distance in to the protein and is
about 20 Å in length and about 10 Å x 15 Å in transverse
section.   The substrate is believed to bind before the cofactor,
because the cofactor binds at the mouth of the cavity
effectively blocking access to the cavity.   Figure 6 is a stereo
pair wire-frame electron density map of the substrate binding
site showing a ketopantoate product molecule (KPL) and a metal
ion believed to be Mg^{2+} on which the enzyme is dependent for its
activity.

The electrostatic potential map for a protomer (shown in
Figure 7) demonstrates that the opening mouth of the binding
cavity is highly charged.   The surface contains eight highly
conserved residues that hydrogen bond to each other and the
substrate or product.   As shown in Figure 8, which is a stereo
pair ribbon representation of the binding cavity, Asp 45 and Asp
84 hydrogen bond to Gln 142 and Lys 112, respectively, while Ser
46, Glu 181 and Lys 112 hydrogen bond to ketopantoate and the
residues Tyr 25, His 136 and Asp 84.

The Mg^{2+} ion is bound in a distorted octahedral binding site
of the binding cavity.   Residues, Asp 45 and Asp 84 occupy axial
and equatorial positions, respectively, while Glu 114
coordinates to Mg^{2+} through a water molecule that occupies an
equatorial position.   The keto and carboxyl groups of the
product take up an axial and an equatorial position,
respectively and the last equatorial position is occupied by a

water molecule.   Figure 9 shows a schematic representation of the distorted octahedral binding site.

The coordination around Mg^{2+} is distorted due to hydrogen bonding between Glu 181 and the hydroxymethyl group of the product. We believe the geometry of the Mg^{2+} ion is less distorted, and hence lower in stabilization energy, when ketopantoate (product) is replaced by α-KIVA (substrate). This may be one mechanism by which the enzyme senses and releases the product.

Cofactor Binding Site

As yet, a 5,10-CH_2-H_4folate cofactor binding motif has not been identified by X-ray crystallography. Nonetheless, we have developed an approach to find the cofactor binding site.

Initially we compared our structure to structures of tetrahydrofolate-dependent enzymes bound to folate analogues. The January, 2001 release of the Protein Data Bank (PDB) contains seven enzymes that bind tetrahydrofolate (THF). These are dihydrofolate reductase (DHFR), phosphoribosylglycinamide formyltransferase (PRGF), methylenetetrahydrofolate dehydrogenase (MTDH), glycinamide ribonucleotide transformylase (GRTF), thymidylate synthase (TS), serine hydroxymethyl transferase (SHMT), and methylenetetrahydrofolate reductase (MTR). A structural similarity search by the program *DALI* (24) shows that only four of the above proteins appear to be similar to KPHMT (SEQ ID NOs: 7-11, for example). These are MTR, DHFR, PRGF and SHMT, but for MTR, DHFR and PRGF, the distance of the folate cofactor binding site is too far from the substrate binding site relative to the corresponding distance in KPHMT (SEQ ID NOs: 7-11, for example).

This left SHMT, which appears to be functionally similar to KPHMT (SEQ ID NOs: 7-11, for example), although SHMT is a class I aldolase (KPHMT (SEQ ID NOs: 7-11, for example) is a class II aldolase) because pyridoxal phosphate is used in addition to the folate cofactor. Given the crystal structures of SHMT from *E.*

coli bound to the folate, 5-formyl-THF (25) and TS bound to 5,10-CH_2-H_4folate or analogues thereof (26), we were able to propose a tentative model for the binding 5,10-CH_2-H_4folate to KPHMT (SEQ ID NOs: 7-11, for example).

Next, using multiple sequence alignment (see Figure 5) to identify residues implicated in cofactor binding, we were able to fine tune the proposed model for cofactor binding. The fine tuned model is shown in Figures 10a and b which are side and top view stereo pair ribbon representations of the mouth of the binding cavity.

In this model, 5,10-CH_2-H_4folate (mTHF) binds near the entrance to the binding cavity at a depth of 15Å. The distance between the target carbon atoms, C11 in 5,10-CH_2-H_4folate and C3 in the substrate, is about 4.5Å, a favourable distance for a reaction to occur.

The cofactor makes relatively few contacts with the protein. Interestingly, these contacts are located in regions of undefined secondary structure, namely, the loop regions that compose the entrance to the binding cavity. The loops in question are between β5 and α7 (L1), α9 and α10 (L2) and the C-terminus (L3). Being regions of undefined secondary structure these loops may be highly flexible and thus, undergo structural changes upon cofactor binding. We have identified conserved residues that impart either flexibility or make strong interactions that may impart rigidity (definition) to these loops. Thus we believe that upon cofactor binding these loops undergo discrete structural changes.

Loop, L1, contains two of the six above-mentioned conserved motifs. The first half of this loop, is located deeper in the binding cavity and contains Gln 142, which H-bonds to the axial Mg^{2+} ligand, Asp 45. This half of the loop is probably rigid since it contains a turn between Asn 145 and Gly 149. The second half of the loop consists predominantly of the second motif. Both ends of this motif, namely residues Gly 148 (invariant) and Gly 154 may make this part of the loop flexible.

Gln 153 is implicated in a hydrogen bond to the amide of Lys 151, which upon cofactor binding may move to interact with the polyglutamate chain of the cofactor (see below for more discussion of this). Loop, L2, is relatively long with little sequence conservation. Invariant Gly 220 may impart some flexibility to this loop while residues Asp 217, Lys 228 and Phe 229 are implicated in binding the cofactor. In L3, invariant Pro 257 is in van der Waals contact with Gly 205 and Gln 211, while His 261 hydrogen bonds to Lys 228 and Glu 260. Thus, the deletion of Gly 168 in *A. nidulans* would lead to a distortion in the loop between β7 and β8 which may in turn lead to a disordering in adjacent loops such as L3 which could potentially prevent cofactor from binding. We, therefore propose that the *panB* auxotroph from *A. nidulans* is caused by the inability of the mutant KPHMT (SEQ ID NOs: 7-11, for example) enzyme to bind the cofactor and therefore to function.

There are four main protein-cofactor interactions, namely, three hydrogen bonds and a π-stacking interaction. The nitrogen atom at N2 of $5,10\text{-}CH_2\text{-}H_4$folate hydrogen bonds to Asp 217, while the side chain carboxyl group of the first glutamate hydrogen bonds to the carboxyl group of Tyr 150, and Lys 228. A stronger interaction is a π-stacking or hydrophobic interaction between the *p*-aminobenzoic acid (PABA) ring of the cofactor and the highly conserved residues Tyr 150 and Phe 229. Tyr 150 or phenylalanine, which in this instance is a functional replacement, is found at this position in 31 out of the 35 KPHMT (SEQ ID NOs: 7-11, for example) sequences discussed above, while Phe 229 is found at this position in 34 out of the 35 KPHMT (SEQ ID NOs: 7-11, for example) sequences. Interestingly, crystal structures of the THF-dependent enzymes, TS and SHMT, with cofactor analogues bound, also implicate a π-stacking or hydrophobic interaction between the PABA ring and a tyrosine or phenylalanine (25). It would appear that nature has converged on this mechanism to bind folate cofactors.

Most folate-dependent enzymes have a higher affinity for the polyglutamate form of the folate cofactor, with the greatest increase in affinity occurring with two or three glutamate residues (27). Presumably, the polyglutamate tail increases the affinity for enzyme through interactions with surface positive charges. In the crystal structure of the bifunctional enzyme dihydrofolate reductase-thymidylate synthase from *Leishmania major*, the polyglutamate tail of dihydrofolate makes few specific contacts but rather is held in place by the positive charge of the local electrostatic field (28). We have identified four positive residues in KPHMT (SEQ ID NOs: 7-11, for example) that could interact with the polyglutamate tail. These are Lys 151, Arg 155 (in loop L1), Lys 231 (in loop L2) and His 261 (in loop L3).

KPHMT (SEQ ID NOs: 7-11, for example) Catalysis

KPHMT (SEQ ID NOs: 7-11, for example) catalyses the transfer of a hydroxymethyl group from cofactor (5,10-CH$_2$-H$_4$folate) to substrate (α-KIVA). The transferase reaction is an aldol reaction, namely deprotonation of the C3- carbon of α-KIVA followed by nucleophilic attack on the cofactor. The crystal structure of the apo enzyme gives insights in to the first stage in the enzyme mechanism, namely, activation of substrate and cofactor.

The C3 carbon is intrinsically acidic, through conjugation of the carboxyl and keto group, however, its acidity is enhanced by coordination of the substrate to the magnesium ion. Magnesium coordination also anchors and orients the substrate for subsequent deprotonation and nucleophilic attack. Also, the increase in distortion from octahedral geometry between substrate and product bound to the ion may be one mechanism by which the enzyme senses and releases product. The basic residue involved in abstraction of the C-3 proton of α-KIVA is believed to be Glu 181. The basicity of this residue is enhanced by a network of hydrogen bonds connecting residue Glu 181 with

residues His 136 and Lys112, which constitute an invariant triad. In the crystal structure of the apo enzyme, Glu 181 is involved in a hydrogen bond with the hydroxymethyl group of the product ketopantoate - giving rise to the greater distortion from octahedral geometry. A final role for this versatile residue is as the acid in the protonation of N10 of 5,10-CH_2-H_4folate. Kallen and Jencks (29) have concluded that the reactive component of the 5,10-CH_2-H_4folate cofactor is the iminium intermediate, formed by breakage of the C11-N10-bond and protonation of N10. This is supported by the crystal structure of TS from *Lactobacillus casei* where the imidazolidine ring has opened and the iminium intermediate has been hydrated (26). Thus, Glu 181 is believed to abstract a proton from α-KIVA and supply it to the cofactor.

Evidence for Cooperativity

     KPHMT (SEQ ID NOs: 7-11, for example), the first enzyme in the pathway for the synthesis of pantothenic acid (see Figure 1), is inhibited by later intermediates, namely pantoate, pantothenate and CoA (1). This is most probably linked to the decameric architecture of the enzyme and involves multiple binding sites for effectors such as later pathway intermediates. All three, pantoate, pantothenate and CoA exhibit negative feedback, decreasing V_{max}, increasing K_m and enhancing cooperativity for the substrate. We believe we have found evidence, albeit tentative, of communication between protomers, a pre-requisite for cooperativity.

     As pointed out earlier, the interface between protomers in the dimeric unit is tightly organised, involving 88 (20 hydrophilic and 68 hydrophobic) interactions. In particular one network of hydrogen bonds links the binding cavities of the vertically adjacent protomers. In the crystal structure of the apo enzyme, the products in the two vertically adjacent binding cavities are separated by only 31 Å. The H-bond network extends from ketopantoate to Ser 46 then Tyr 25 and His 68 of one

subunit to Tyr 67 then His 68 then Tyr 25 then Ser 46 and
finally ketopantoate of the next subunit.   In the multiple
sequence alignment discussed above all residues except Tyr 67
are conserved.   An interaction between Asp 26 of one subunit and
His 68 of the next could replace this interaction in organisms
where there is no residue at position 67 able to H-bond to His
68.   The alternate H-bond network would then extend from
keptanoate to Ser 46 then Tyr 25 then Asp 26 of one subunit to
His 68 then Tyr 25 then Ser 46 and finally keptanoate of the
next subunit (see Figure 11b which is a stereo pair ribbon
representation of the binding cavities of a modified KPHMT (SEQ
ID NOs: 7-11, for example) dimer).

         We believe we have also identified communication between
subunits within the same pentamer.   This interface is close to
the opening to the binding cavity, the C-terminus (loop, L3),
loop, L1 and the N-terminus of the adjacent subunit (see Figure
11b which is a stereo pair ribbon representation of the
interface between adjacent KPHMT (SEQ ID NOs: 7-11, for example)
dimers).   Binding of cofactor and substrate would affect the
structure of loops, L1 and L3 and thus affect the interaction at
this interface.   Of particular note, is the region within loop,
L1 consisting of residues Gly 138 to Glu 158.   Residues, Gln 142
and Tyr 150 are respectively implicated in interacting with Mg^{2+}
(indirectly) and cofactor.   We have also identified a residue,
Lys 151, that in the crystal structure of the apo enzyme H-bonds
across the interface to Thr 5 of the adjacent dimer.   We
speculate that binding of cofactor will cause loop L1 to move in
this region, the Lys 151 - Thr 5 interaction to break, and a new
interaction between Lys 151 and the polyglutamate tail of the
cofactor to form.

Structure-Based Drug Design
         Determination of the 3D structure of KPHMT (SEQ ID NOs: 7-
11, for example) provides important information about the
binding sites of KPHMT (SEQ ID NOs: 7-11, for example),

particularly when comparisons are made with similar enzymes. This information may then be used for rational design of KPHMT (SEQ ID NOs: 7-11, for example) inhibitors, e.g. by computational techniques which identify possible binding ligands for the binding sites, by enabling linked-fragment approaches to drug design, and by enabling the identification and location of bound ligands using X-ray crystallographic analysis. These techniques are discussed in more detail below.

Greer *et al.* describes an iterative approach to ligand design based on repeated sequences of computer modelling, protein-ligand complex formation and X-ray crystallographic or NMR spectroscopic analysis. Thus novel thymidylate synthase inhibitor series were designed *de novo* by Greer *et al.*, and KPHMT (SEQ ID NOs: 7-11, for example) inhibitors may also be designed in the this way. More specifically, using e.g. GRID on the solved 3D structure of KPHMT (SEQ ID NOs: 7-11, for example), a ligand (e.g. a potential inhibitor) for KPHMT (SEQ ID NOs: 7-11, for example) may be designed that complements the functionalities of the KPHMT (SEQ ID NOs: 7-11, for example) binding site(s). The ligand can then be synthesised, formed into a complex with KPHMT (SEQ ID NOs: 7-11, for example), and the complex then analysed by X-ray crystallography to identify the actual position of the bound ligand. The structure and/or functional groups of the ligand can then be adjusted, if necessary, in view of the results of the X-ray analysis, and the synthesis and analysis sequence repeated until an optimised ligand is obtained. Related approaches to structure-based drug design are also discussed in Bohacek *et al.*, Medicinal Research Reviews, Vol.16, (1996), 3-50.

As a result of the determination of the KPHMT (SEQ ID NOs: 7-11, for example) 3D structure, more purely computational techniques for rational drug design may also be used to design KPHMT (SEQ ID NOs: 7-11, for example) inhibitors (for an overview of these techniques see e.g. Walters *et al.*). For example, automated ligand-receptor docking programs (discussed

e.g. by Jones *et al.* in Current Opinion in Biotechnology, Vol.6, (1995), 652-656) which require accurate information on the atomic coordinates of target receptors may be used to design potential KPHMT (SEQ ID NOs: 7-11, for example) inhibitors.

Linked-fragment approaches to drug design also require accurate information on the atomic coordinates of target receptors. The basic idea behind these approaches is to determine (computationally or experimentally) the binding locations of plural ligands to a target molecule, and then construct a molecular scaffold to connect the ligands together in such a way that their relative binding positions are preserved. The connected ligands thus form a potential lead compound that can be further refined using e.g. the iterative technique of Greer *et al.*. For a virtual linked-fragment approach see Verlinde *et al.*, J. of Computer-Aided Molecular Design, 6, (1992), 131-147, and for NMR and X-ray approaches see Shuker *et al.*, Science, 274, (1996), 1531-1534 and Stout *et al.*, Structure, 6, (1998), 839-848. The use of these approaches to design KPHMT (SEQ ID NOs: 7-11, for example) inhibitors is made possible by the determination of the KPHMT (SEQ ID NOs: 7-11, for example) structure.

Many of the techniques and approaches to structure-based drug design described above rely at some stage on X-ray analysis to identify the binding position of a ligand in a ligand-protein complex. A common way of doing this is to perform X-ray crystallography on the complex, produce a difference Fourier electron density map, and associate a particular pattern of electron density with the ligand. However, in order to produce the map (as explained e.g. by Blundell *et al.*) it is necessary to know beforehand the protein 3D structure (or at least the protein structure factors). Therefore, determination of the KPHMT (SEQ ID NOs: 7-11, for example) structure also allows difference Fourier electron density maps of KPHMT (SEQ ID NOs: 7-11, for example)-ligand complexes to be produced, which can greatly assist the process of rational drug design.

The approaches to structure-based drug design described above all require initial identification of possible compounds for interaction with target bio-molecule (in this case KPHMT (SEQ ID NOs: 7-11, for example)). Sometimes these compounds are known e.g. from the research literature. However, when they are not, or when novel compounds are wanted, a first stage of the drug design program may involve computer-based *in silico* screening of compound databases (such as the Cambridge Structural Database) with the aim of identifying compounds which interact with the binding site or sites of the target bio-molecule. Screening selection criteria may be based on pharmacokinetic properties such as metabolic stability and toxicity. However, determination of the KPHMT (SEQ ID NOs: 7-11, for example) structure allows the architecture and chemical nature of each KPHMT (SEQ ID NOs: 7-11, for example) binding site to be identified, which in turn allows the geometric and functional constraints of a descriptor for the potential inhibitor to be derived. The descriptor is, therefore, a type of virtual 3-D pharmacophore, which can also be used as selection criteria or filter for database screening.

While the invention has been described in conjunction with the exemplary embodiments described above, many equivalent modifications and variations will be apparent to those skilled in the art when given this disclosure. Accordingly, the exemplary embodiments of the invention set forth are considered to be illustrative and not limiting. Various changes to the described embodiments may be made without departing from the spirit and scope of the invention.

The references in the above text and listed below are incorporated by reference.

References

1) Powers, S. G. & Snell, E. E. (1976). Ketopantoate Hydroxymethyltransferase (II) [Physical, Catalytic, and Regulatory Properties]. *J. Biol. Chem.* **251**, 3786-3793.

2) Jones, C. E., Brook, J., Buck, D., Abell, C. and Smith, A. G. (1993). Cloning and sequencing of the *Escherichia coli panB* gene, which encodes ketopantoate hydroxymethyltransferase, and overexpression of the enzyme. *Journal of Bacteriology* **175**, 2125-2130.

3) Kurtov, D., Kinghorn, J. R., and Unkles, S. E. (1999). The *Aspergillus nidulans* panB gene encodes ketopantoate hydroxymethyltransferase, required for biosynthesis of pantothenate and Coenzyme A. *Mol. Gen. Genet.* **262**, 115-120.

4) Aberhart, D. J. and Russel, D. J. (1984). Steric course of N5,N10-methylenetetrahydrofolate formation from glycine by the glycine cleavage system in *Escherichia coli. Journal of the American Chemical Society* **106**, 4907-4910.

5) Cronan Jr, JE, Littel, KJ and Jackowski, S (1982). Genetic and biochemical analyses of pantothenate biosyntheis in *Escherichia coli* and *Salmonella typhimurium. J. Bacteriol.* **149**, 916-922.

6) Sahi, S.V., Saxena, P.K., Abrahams, G.D. and King, J. (1988). Identification of the biochemical lesion in a pantothenate-requiring auxotroph of *Datura innoxia* P. Mill *J. Plant Physiol.*, **133**, 277-280

7) Brünger, A.T., Kurian, J., and Karplus, M. (1987). Crystallographic R factor refinement by molecular dynamics. *Science* **235**, 458-560.

8) Doublie, S. (1997). Preparation of Selenomethyionyl Proteins for Phase Determination. *Methods in Enzymology* **276**, 523-530.

9) Hendrickson W. A. (1991). Determination of macromolecular structures from anomalous diffraction of synchrotron radiation. *Science* **254**, 51-58.

10) Pflugrath, J. W. (1999). The finer things in X-ray diffraction data collection. *Acta Crystallographica* **D55**, 1718-1725.

11) Leslie, A. G. W. (1992). In *Joint CCP4 and EESF-EACMB Newsletter on Protein Crystallography*, vol. 26, Warrington, Daresbury Laboratory.

12) CCP4 – Collaborative Computational Project 4. (1994) The CCP4 Suite: Programs for Protein Crystallography. *Acta Crystallographica* **D50**, 760-763.

13) Evans, P. R. (1997). Scaling of MAD data. In *Recent Advances in Phasing* (ed. K. S. Wilson, G. Davies, A. W. Ashton and S. Bailey), pp. 97-102. Council for the Central Laboratory of the Research Councils Daresbury Laboratory, Daresbury, UK.

14) Weeks, C. M., Detitta, G. T., Hauptman, H. A., Thuman, P. and Miller, R. (1994). Structure solution by minimal function phase refinement and Fourier filtering II. Implementation and applications. *Acta Crystallographica* **A50**, 210-220.

15) La Fortelle, E. de and Bricogne, G. (1997). Maximum-likelihood heavy-atom parameter refinement for multiple isomorphous replacement and multiwavelength anomalous diffraction methods. *Methods in Enzymology* **276**, 472-494.

16) Jones, T. A., Zou, J. Y., Cowan, S. W. and Kjeldgaard, M. (1991). Improved methods for building protein models in electron density maps and the location of errors in these models. *Acta Crystallographica*, **A47**, 110-119.

17) Murshudov, G. N., Vagin, A. A. and Dodson, E. J. (1997). Refinement of macromolecular structures by the maximum-likelihood method. *Acta Crystallographica*, 1997 **D53**, 240-255.

18) Brünger, A. T., Adams, P. D., Clore, G. M., DeLano, W. L., Gros, P., Grosse-Kunstleve, R. W., Jiang, J. S., Kuszewski, J., Nilges, M., Pannu, N. S., Read, R. J., Rice, L. M., Simonson, T. and Warren, G. L. (1998). Crystallography & NMR system: A new software suite for macromolecular structure determination. *Acta Crystallographica* **D54**, 905-921.

19) Laskowski, R. A. (1993). *PROCHECK*: a program to check the stereochemical quality of preotein structures. *J. Appl. Cryst.* **26**, 283-291.

20) Teller, J. H., Powers, S. G. and Snell, E. E. (1976). Ketopantoate hydroxymethyltransferase. I. Purification and role in pantothenate biosynthesis. *J. Biol. Chem.* **251**, 3780-3785.

21) Brändén, C.-I. (1980). Relation between structure and function of alpha-beta-proteins. *Quarterly Rev. of Biophys.* **13**, 317-338.

22) Altschul, S. F., Madden, T. L., Schaffer, A. A., Zhang, Z., Miller, W. and Lipman, D. J. (1997). Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. *Nucleic Acids Res.*, **25** 3389-3402.

23) Thompson, J. D., Higgins, D. G. and Gibson, T. J. (1994). CLUSTAL W: improving the sensitivity of progressive

multiple sequence alignment through sequence weighting, positions-specific gap penalties and weight matrix choice. *Nucleic Acids Research* **22**, 4673-4680.

24) Holm, L. and Sander, C. (1998). Touring protein fold space with Dali/FSSP. *Nucleic Acids Research* **26**, 316-319.

25) Scarsdale, J. N., Kazanina, G., Radaev, S., Schirch, V., and Wright, H. T. (1999). Crystal structure of rabbit cytosolic serine hydroxymethyltransferase at 2.8 Å resolution: mechanistic implications. *Biochemistry* **38**, 8347-8358.

26) Perry, K. M., Fauman, E. B., Finer-Moore, J. S., Montfort, W. R., Maley, G. F., Maley, F., Stroud, R. M. (1990). Plastic adaptation toward mutations in proteins: structural comparison of thymidylate synthases. *Proteins* **8**, 315-333.

27) Schirch, V., and Strong, W. B. (1989) Interaction of folylpolyglutamates with enzymes in one-carbon metabolism. *Arch. Biochem. Biophys.* **269**, 371-380.

28) Knighton, D.R., Kan, C.C., Howland, E., Janson, C.A., Hostomska, Z., Welsh, K.M. and Matthews, D.A. (1994). Structure of and kinetic channelling in bifunctional dihydrofolate reductase-thymidylate synthase. *Nat. Struct. Biol.* **1**, 186-194.

29) Kallen, R. G. & Jencks. (1966). The mechanism of the condensation of formaldehyde with tetrahydrofolic acid. *Journal of Biological Chemistry* **241**, 5851-5863.

TABLE 1

```
REMARK coordinates from minimization and B-factor refinement
REMARK refinement resolution: 500.0 - 1.8 A
REMARK starting r= 0.2289 free_r= 0.2635
REMARK final    r= 0.2292 free_r= 0.2638
REMARK rmsd bonds= 0.005641  rmsd angles=  1.11562
REMARK B rmsd for bonded mainchain atoms=  1.325  target= 1.5
REMARK B rmsd for bonded sidechain atoms=  2.001  target= 2.0
REMARK B rmsd for angle mainchain atoms=  2.071  target= 2.0
REMARK B rmsd for angle sidechain atoms=  2.863  target= 2.5
REMARK target= mlf  final wa= 1.10321
REMARK final rweight= 0.0678 (with wa= 1.10321)
REMARK md-method= torsion  annealing schedule= constant
REMARK starting temperature= 1000  total md steps= 1 * 100
REMARK cycles= 2 coordinate steps= 20 B-factor steps= 10
REMARK sg= P2(1) a= 86.074 b= 157.17 c= 100.181 alpha= 90 beta= 97.44 gamma= 90
REMARK topology file 1  : CNS_TOPPAR:protein.top
REMARK topology file 2  : CNS_TOPPAR:dna-rna.top
REMARK topology file 3  : CNS_TOPPAR:water.top
REMARK topology file 4  : CNS_TOPPAR:ion.top
REMARK topology file 5  : ./TOPH_PARAM/kpl.toph
REMARK parameter file 1  : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2  : CNS_TOPPAR:dna-rna_rep.param
REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
REMARK parameter file 4  : CNS_TOPPAR:ion.param
REMARK parameter file 5  : ./TOPH_PARAM/kpl.param
REMARK molecular structure file: generate.mtf
REMARK input coordinates: generate.pdb
REMARK reflection file= ./int/panb.cv
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 1.8
REMARK initial B-factor correction applied to fobs :
REMARK   B11=  -1.301 B22=  -2.124 B33=   3.425
REMARK   B12=   0.000 B13=   1.230 B23=   0.000
REMARK B-factor correction applied to coordinate array B:    0.254
REMARK bulk solvent: density level= 0.392735 e/A^3, B-factor= 64.4356 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:   243384 ( 100.0 % )
REMARK number of unobserved reflections (no entry or |F|=0):  14308 (   5.9 % )
REMARK number of reflections rejected:                            0 (   0.0 % )
REMARK total number of reflections used:                     229076 (  94.1 % )
REMARK number of reflections in working set:                 206168 (  84.7 % )
REMARK number of reflections in test set:                     22908 (   9.4 % )
CRYST1   86.074  157.170  100.181  90.00   97.44   90.00 P 21
REMARK FILENAME="refine.pdb"
REMARK DATE:17-Oct-00  01:40:10       created by user: inouet
REMARK VERSION:1.0
ATOM      1  CB  MET     1      1.201  12.262  69.884  1.00 67.43
ATOM      2  CG  MET     1      0.767  11.220  70.906  1.00 69.43
ATOM      3  SD  MET     1      1.582  11.428  72.507  1.00 72.24
ATOM      4  CE  MET     1      3.012  10.336  72.306  1.00 71.04
ATOM      5  C   MET     1      1.282  10.813  67.848  1.00 63.63
ATOM      6  O   MET     1      2.165  10.936  66.998  1.00 63.58
ATOM      7  N   MET     1     -0.854  11.909  68.546  1.00 65.98
ATOM      8  CA  MET     1      0.631  12.042  68.480  1.00 65.57
ATOM      9  N   LYS     2      0.841   9.631  68.271  1.00 61.39
ATOM     10  CA  LYS     2      1.376   8.379  67.750  1.00 58.18
ATOM     11  CB  LYS     2      1.946   7.518  68.886  1.00 59.31
ATOM     12  CG  LYS     2      3.141   8.121  69.610  1.00 60.51
ATOM     13  CD  LYS     2      3.805   7.096  70.523  1.00 61.39
ATOM     14  CE  LYS     2      2.844   6.572  71.585  1.00 62.31
ATOM     15  NZ  LYS     2      3.441   5.457  72.377  1.00 62.32
ATOM     16  C   LYS     2      0.313   7.577  67.003  1.00 54.66
ATOM     17  O   LYS     2     -0.258   6.631  67.548  1.00 55.68
ATOM     18  N   PRO     3      0.021   7.953  65.749  1.00 50.09
ATOM     19  CD  PRO     3     -0.580   7.007  64.792  1.00 49.24
ATOM     20  CA  PRO     3      0.633   9.074  65.034  1.00 45.89
ATOM     21  CB  PRO     3      0.847   8.501  63.644  1.00 47.20
ATOM     22  CG  PRO     3     -0.403   7.717  63.455  1.00 47.74
ATOM     23  C   PRO     3     -0.291  10.290  65.014  1.00 41.96
ATOM     24  O   PRO     3     -1.403  10.253  65.547  1.00 40.18
ATOM     25  N   THR     4      0.175  11.363  64.389  1.00 37.27
ATOM     26  CA  THR     4     -0.605  12.586  64.284  1.00 33.03
ATOM     27  CB  THR     4      0.316  13.808  64.214  1.00 32.00
ATOM     28  OG1 THR     4      1.113  13.866  65.403  1.00 29.60
```

```
ATOM      29   CG2  THR    4      -0.496   15.084   64.077   1.00  30.09
ATOM      30   C    THR    4      -1.436   12.516   63.012   1.00  31.90
ATOM      31   O    THR    4      -0.890   12.415   61.917   1.00  31.80
ATOM      32   N    THR    5      -2.755   12.574   63.156   1.00  30.88
ATOM      33   CA   THR    5      -3.636   12.494   61.999   1.00  29.95
ATOM      34   CB   THR    5      -4.616   11.320   62.137   1.00  30.13
ATOM      35   OG1  THR    5      -5.545   11.602   63.189   1.00  31.18
ATOM      36   CG2  THR    5      -3.864   10.035   62.462   1.00  29.84
ATOM      37   C    THR    5      -4.445   13.764   61.789   1.00  28.70
ATOM      38   O    THR    5      -4.407   14.684   62.605   1.00  28.11
ATOM      39   N    ILE    6      -5.184   13.804   60.685   1.00  28.91
ATOM      40   CA   ILE    6      -6.009   14.961   60.360   1.00  29.62
ATOM      41   CB   ILE    6      -6.777   14.749   59.042   1.00  30.80
ATOM      42   CG2  ILE    6      -7.445   16.047   58.617   1.00  29.12
ATOM      43   CG1  ILE    6      -5.813   14.298   57.945   1.00  33.13
ATOM      44   CD1  ILE    6      -6.513   13.840   56.671   1.00  34.94
ATOM      45   C    ILE    6      -7.016   15.189   61.477   1.00  29.79
ATOM      46   O    ILE    6      -7.339   16.327   61.813   1.00  30.34
ATOM      47   N    SER    7      -7.499   14.091   62.051   1.00  29.76
ATOM      48   CA   SER    7      -8.474   14.142   63.138   1.00  30.44
ATOM      49   CB   SER    7      -8.748   12.730   63.653   1.00  31.47
ATOM      50   OG   SER    7      -8.920   11.822   62.575   1.00  37.31
ATOM      51   C    SER    7      -7.954   15.006   64.285   1.00  29.13
ATOM      52   O    SER    7      -8.712   15.751   64.909   1.00  28.63
ATOM      53   N    LEU    8      -6.655   14.902   64.556   1.00  27.78
ATOM      54   CA   LEU    8      -6.035   15.668   65.630   1.00  27.46
ATOM      55   CB   LEU    8      -4.553   15.296   65.778   1.00  28.11
ATOM      56   CG   LEU    8      -3.954   15.254   67.190   1.00  30.83
ATOM      57   CD1  LEU    8      -2.452   15.499   67.105   1.00  30.15
ATOM      58   CD2  LEU    8      -4.594   16.302   68.086   1.00  32.65
ATOM      59   C    LEU    8      -6.141   17.173   65.378   1.00  26.61
ATOM      60   O    LEU    8      -6.388   17.943   66.303   1.00  26.41
ATOM      61   N    LEU    9      -5.951   17.589   64.129   1.00  23.76
ATOM      62   CA   LEU    9      -6.024   19.005   63.799   1.00  24.65
ATOM      63   CB   LEU    9      -5.388   19.279   62.431   1.00  22.20
ATOM      64   CG   LEU    9      -3.926   18.838   62.239   1.00  19.92
ATOM      65   CD1  LEU    9      -3.403   19.371   60.914   1.00  18.82
ATOM      66   CD2  LEU    9      -3.076   19.367   63.382   1.00  18.44
ATOM      67   C    LEU    9      -7.468   19.500   63.805   1.00  26.68
ATOM      68   O    LEU    9      -7.737   20.650   64.151   1.00  26.46
ATOM      69   N    GLN   10      -8.396   18.627   63.426   1.00  29.15
ATOM      70   CA   GLN   10      -9.808   18.990   63.403   1.00  32.76
ATOM      71   CB   GLN   10     -10.632   17.869   62.764   1.00  32.40
ATOM      72   CG   GLN   10     -12.091   18.220   62.511   1.00  34.98
ATOM      73   CD   GLN   10     -12.263   19.495   61.698   1.00  34.51
ATOM      74   OE1  GLN   10     -12.158   20.601   62.228   1.00  35.90
ATOM      75   NE2  GLN   10     -12.518   19.343   60.403   1.00  33.91
ATOM      76   C    GLN   10     -10.256   19.239   64.841   1.00  34.38
ATOM      77   O    GLN   10     -11.132   20.066   65.093   1.00  35.73
ATOM      78   N    LYS   11      -9.640   18.528   65.781   1.00  36.20
ATOM      79   CA   LYS   11      -9.961   18.694   67.193   1.00  37.50
ATOM      80   CB   LYS   11      -9.374   17.548   68.023   1.00  39.71
ATOM      81   CG   LYS   11      -9.466   17.788   69.526   1.00  42.23
ATOM      82   CD   LYS   11      -8.571   16.850   70.326   1.00  45.49
ATOM      83   CE   LYS   11      -9.131   15.436   70.387   1.00  47.75
ATOM      84   NZ   LYS   11      -8.313   14.563   71.283   1.00  48.44
ATOM      85   C    LYS   11      -9.378   20.016   67.677   1.00  37.17
ATOM      86   O    LYS   11      -9.988   20.721   68.483   1.00  38.57
ATOM      87   N    TYR   12      -8.189   20.345   67.181   1.00  36.59
ATOM      88   CA   TYR   12      -7.512   21.585   67.548   1.00  35.53
ATOM      89   CB   TYR   12      -6.145   21.665   66.864   1.00  36.51
ATOM      90   CG   TYR   12      -5.070   20.803   67.486   1.00  37.30
ATOM      91   CD1  TYR   12      -3.889   20.534   66.797   1.00  38.03
ATOM      92   CE1  TYR   12      -2.880   19.769   67.371   1.00  38.86
ATOM      93   CD2  TYR   12      -5.217   20.281   68.772   1.00  37.36
ATOM      94   CE2  TYR   12      -4.213   19.515   69.356   1.00  38.58
ATOM      95   CZ   TYR   12      -3.047   19.264   68.648   1.00  39.25
ATOM      96   OH   TYR   12      -2.044   18.514   69.220   1.00  40.19
ATOM      97   C    TYR   12      -8.324   22.815   67.169   1.00  34.82
ATOM      98   O    TYR   12      -8.451   23.748   67.960   1.00  34.13
ATOM      99   N    LYS   13      -8.860   22.822   65.953   1.00  34.10
ATOM     100   CA   LYS   13      -9.652   23.960   65.496   1.00  35.74
ATOM     101   CB   LYS   13     -10.087   23.765   64.041   1.00  34.52
ATOM     102   CG   LYS   13     -10.895   24.927   63.458   1.00  34.21
ATOM     103   CD   LYS   13     -11.268   24.645   62.001   1.00  31.63
ATOM     104   CE   LYS   13     -12.274   25.645   61.433   1.00  31.85
ATOM     105   NZ   LYS   13     -11.675   26.929   60.984   1.00  30.98
```

```
ATOM    106  C    LYS    13    -10.878   24.124   66.385   1.00 36.28
ATOM    107  O    LYS    13    -11.336   25.240   66.622   1.00 34.68
ATOM    108  N    GLN    14    -11.404   23.004   66.869   1.00 38.20
ATOM    109  CA   GLN    14    -12.572   23.018   67.744   1.00 40.77
ATOM    110  CB   GLN    14    -13.049   21.591   68.007   1.00 42.50
ATOM    111  CG   GLN    14    -13.662   20.906   66.800   1.00 47.11
ATOM    112  CD   GLN    14    -13.789   19.407   66.992   1.00 49.44
ATOM    113  OE1  GLN    14    -14.221   18.939   68.046   1.00 51.52
ATOM    114  NE2  GLN    14    -13.419   18.645   65.967   1.00 50.79
ATOM    115  C    GLN    14    -12.227   23.688   69.071   1.00 40.73
ATOM    116  O    GLN    14    -13.043   24.409   69.648   1.00 40.91
ATOM    117  N    GLU    15    -11.010   23.443   69.545   1.00 39.66
ATOM    118  CA   GLU    15    -10.544   24.008   70.805   1.00 39.32
ATOM    119  CB   GLU    15     -9.544   23.054   71.465   1.00 40.94
ATOM    120  CG   GLU    15    -10.012   21.607   71.509   1.00 43.66
ATOM    121  CD   GLU    15     -9.013   20.679   72.180   1.00 44.96
ATOM    122  OE1  GLU    15     -7.834   20.658   71.768   1.00 44.85
ATOM    123  OE2  GLU    15     -9.409   19.959   73.121   1.00 48.88
ATOM    124  C    GLU    15     -9.880   25.357   70.567   1.00 38.67
ATOM    125  O    GLU    15     -9.381   25.985   71.502   1.00 38.21
ATOM    126  N    LYS    16     -9.889   25.803   69.313   1.00 37.45
ATOM    127  CA   LYS    16     -9.269   27.069   68.939   1.00 36.93
ATOM    128  CB   LYS    16     -9.957   28.235   69.655   1.00 39.24
ATOM    129  CG   LYS    16    -10.820   29.105   68.748   1.00 42.46
ATOM    130  CD   LYS    16     -9.963   29.912   67.783   1.00 44.77
ATOM    131  CE   LYS    16    -10.809   30.700   66.794   1.00 45.69
ATOM    132  NZ   LYS    16    -11.734   31.653   67.466   1.00 45.98
ATOM    133  C    LYS    16     -7.777   27.055   69.272   1.00 35.34
ATOM    134  O    LYS    16     -7.170   28.103   69.507   1.00 34.70
ATOM    135  N    LYS    17     -7.186   25.865   69.304   1.00 33.29
ATOM    136  CA   LYS    17     -5.759   25.752   69.593   1.00 32.28
ATOM    137  CB   LYS    17     -5.440   24.423   70.285   1.00 34.01
ATOM    138  CG   LYS    17     -3.951   24.238   70.580   1.00 36.37
ATOM    139  CD   LYS    17     -3.618   22.820   71.033   1.00 39.39
ATOM    140  CE   LYS    17     -4.198   22.504   72.405   1.00 41.80
ATOM    141  NZ   LYS    17     -3.935   21.089   72.804   1.00 42.95
ATOM    142  C    LYS    17     -4.955   25.854   68.298   1.00 30.45
ATOM    143  O    LYS    17     -4.935   24.923   67.495   1.00 29.95
ATOM    144  N    ARG    18     -4.299   26.993   68.103   1.00 28.24
ATOM    145  CA   ARG    18     -3.486   27.224   66.913   1.00 27.71
ATOM    146  CB   ARG    18     -3.084   28.693   66.841   1.00 26.93
ATOM    147  CG   ARG    18     -4.213   29.588   66.366   1.00 29.98
ATOM    148  CD   ARG    18     -3.904   31.058   66.576   1.00 31.56
ATOM    149  NE   ARG    18     -3.975   31.427   67.989   1.00 33.11
ATOM    150  CZ   ARG    18     -3.874   32.673   68.437   1.00 34.92
ATOM    151  NH1  ARG    18     -3.694   33.671   67.580   1.00 34.93
ATOM    152  NH2  ARG    18     -3.961   32.921   69.736   1.00 33.10
ATOM    153  C    ARG    18     -2.249   26.329   66.912   1.00 26.09
ATOM    154  O    ARG    18     -1.455   26.357   67.852   1.00 27.27
ATOM    155  N    PHE    19     -2.093   25.546   65.845   1.00 24.65
ATOM    156  CA   PHE    19     -0.983   24.601   65.710   1.00 21.83
ATOM    157  CB   PHE    19     -1.543   23.213   65.386   1.00 22.18
ATOM    158  CG   PHE    19     -2.394   23.176   64.147   1.00 21.17
ATOM    159  CD1  PHE    19     -1.813   23.054   62.885   1.00 21.71
ATOM    160  CD2  PHE    19     -3.779   23.275   64.240   1.00 21.90
ATOM    161  CE1  PHE    19     -2.604   23.036   61.730   1.00 20.83
ATOM    162  CE2  PHE    19     -4.582   23.259   63.095   1.00 20.74
ATOM    163  CZ   PHE    19     -3.995   23.137   61.837   1.00 22.45
ATOM    164  C    PHE    19      0.075   24.985   64.678   1.00 20.64
ATOM    165  O    PHE    19     -0.208   25.687   63.708   1.00 20.24
ATOM    166  N    ALA    20      1.298   24.509   64.894   1.00 17.95
ATOM    167  CA   ALA    20      2.409   24.801   63.994   1.00 18.49
ATOM    168  CB   ALA    20      3.671   25.051   64.808   1.00 16.95
ATOM    169  C    ALA    20      2.676   23.705   62.959   1.00 17.84
ATOM    170  O    ALA    20      2.563   22.515   63.253   1.00 19.20
ATOM    171  N    THR    21      3.035   24.126   61.750   1.00 19.33
ATOM    172  CA   THR    21      3.351   23.211   60.654   1.00 21.03
ATOM    173  CB   THR    21      2.235   23.215   59.595   1.00 22.40
ATOM    174  OG1  THR    21      1.013   22.766   60.201   1.00 25.51
ATOM    175  CG2  THR    21      2.583   22.298   58.449   1.00 28.47
ATOM    176  C    THR    21      4.667   23.668   60.022   1.00 18.87
ATOM    177  O    THR    21      5.028   24.846   60.095   1.00 19.63
ATOM    178  N    ILE    22      5.391   22.757   59.387   1.00 17.33
ATOM    179  CA   ILE    22      6.672   23.156   58.822   1.00 16.75
ATOM    180  CB   ILE    22      7.761   23.058   59.915   1.00 16.67
ATOM    181  CG2  ILE    22      8.068   21.593   60.208   1.00 16.67
ATOM    182  CG1  ILE    22      9.009   23.833   59.492   1.00 18.38
```

ATOM	183	CD1	ILE	22	9.959	24.160	60.653	1.00	19.13
ATOM	184	C	ILE	22	7.068	22.314	57.617	1.00	16.22
ATOM	185	O	ILE	22	6.592	21.194	57.459	1.00	16.81
ATOM	186	N	THR	23	7.911	22.868	56.754	1.00	15.76
ATOM	187	CA	THR	23	8.357	22.119	55.586	1.00	19.36
ATOM	188	CB	THR	23	8.756	23.061	54.409	1.00	18.72
ATOM	189	OG1	THR	23	10.010	23.697	54.692	1.00	23.35
ATOM	190	CG2	THR	23	7.699	24.155	54.216	1.00	23.17
ATOM	191	C	THR	23	9.564	21.285	56.014	1.00	18.45
ATOM	192	O	THR	23	10.274	21.643	56.954	1.00	18.13
ATOM	193	N	ALA	24	9.772	20.155	55.343	1.00	17.71
ATOM	194	CA	ALA	24	10.897	19.276	55.633	1.00	16.52
ATOM	195	CB	ALA	24	10.575	18.345	56.796	1.00	16.73
ATOM	196	C	ALA	24	11.132	18.483	54.358	1.00	15.72
ATOM	197	O	ALA	24	10.181	18.183	53.634	1.00	13.61
ATOM	198	N	TYR	25	12.387	18.148	54.079	1.00	15.44
ATOM	199	CA	TYR	25	12.713	17.420	52.859	1.00	15.30
ATOM	200	CB	TYR	25	13.205	18.389	51.780	1.00	16.75
ATOM	201	CG	TYR	25	12.454	19.697	51.729	1.00	19.07
ATOM	202	CD1	TYR	25	12.934	20.822	52.402	1.00	17.12
ATOM	203	CE1	TYR	25	12.240	22.026	52.379	1.00	22.53
ATOM	204	CD2	TYR	25	11.255	19.808	51.028	1.00	17.14
ATOM	205	CE2	TYR	25	10.546	21.010	50.999	1.00	21.05
ATOM	206	CZ	TYR	25	11.044	22.114	51.678	1.00	22.44
ATOM	207	OH	TYR	25	10.347	23.300	51.669	1.00	25.31
ATOM	208	C	TYR	25	13.785	16.359	53.068	1.00	17.26
ATOM	209	O	TYR	25	14.327	15.837	52.094	1.00	16.21
ATOM	210	N	ASP	26	14.101	16.051	54.320	1.00	15.99
ATOM	211	CA	ASP	26	15.121	15.059	54.604	1.00	16.04
ATOM	212	CB	ASP	26	16.511	15.686	54.453	1.00	14.69
ATOM	213	CG	ASP	26	16.803	16.751	55.507	1.00	16.04
ATOM	214	OD1	ASP	26	17.002	16.391	56.679	1.00	17.13
ATOM	215	OD2	ASP	26	16.829	17.935	55.144	1.00	14.58
ATOM	216	C	ASP	26	14.967	14.426	55.981	1.00	16.01
ATOM	217	O	ASP	26	14.182	14.888	56.813	1.00	16.69
ATOM	218	N	TYR	27	15.718	13.353	56.214	1.00	13.50
ATOM	219	CA	TYR	27	15.660	12.625	57.474	1.00	15.85
ATOM	220	CB	TYR	27	16.591	11.412	57.408	1.00	16.76
ATOM	221	CG	TYR	27	16.777	10.693	58.727	1.00	17.84
ATOM	222	CD1	TYR	27	15.871	9.723	59.150	1.00	17.06
ATOM	223	CE1	TYR	27	16.053	9.046	60.353	1.00	18.09
ATOM	224	CD2	TYR	27	17.873	10.975	59.546	1.00	19.28
ATOM	225	CE2	TYR	27	18.065	10.311	60.748	1.00	20.21
ATOM	226	CZ	TYR	27	17.163	9.350	61.151	1.00	20.97
ATOM	227	OH	TYR	27	17.368	8.691	62.342	1.00	21.54
ATOM	228	C	TYR	27	16.056	13.482	58.671	1.00	15.76
ATOM	229	O	TYR	27	15.338	13.544	59.670	1.00	16.46
ATOM	230	N	SER	28	17.216	14.121	58.560	1.00	16.97
ATOM	231	CA	SER	28	17.763	14.943	59.630	1.00	17.00
ATOM	232	CB	SER	28	19.034	15.643	59.146	1.00	19.12
ATOM	233	OG	SER	28	20.029	14.671	58.842	1.00	22.00
ATOM	234	C	SER	28	16.798	15.957	60.222	1.00	17.23
ATOM	235	O	SER	28	16.485	15.905	61.422	1.00	16.02
ATOM	236	N	PHE	29	16.307	16.881	59.408	1.00	15.80
ATOM	237	CA	PHE	29	15.382	17.864	59.965	1.00	16.28
ATOM	238	CB	PHE	29	15.181	19.025	59.000	1.00	14.20
ATOM	239	CG	PHE	29	16.321	19.988	59.001	1.00	15.71
ATOM	240	CD1	PHE	29	17.354	19.871	58.075	1.00	14.27
ATOM	241	CD2	PHE	29	16.371	21.008	59.946	1.00	13.32
ATOM	242	CE1	PHE	29	18.423	20.764	58.080	1.00	15.74
ATOM	243	CE2	PHE	29	17.430	21.904	59.967	1.00	17.20
ATOM	244	CZ	PHE	29	18.463	21.787	59.031	1.00	14.83
ATOM	245	C	PHE	29	14.044	17.284	60.383	1.00	15.83
ATOM	246	O	PHE	29	13.481	17.696	61.398	1.00	16.89
ATOM	247	N	ALA	30	13.532	16.326	59.618	1.00	16.16
ATOM	248	CA	ALA	30	12.256	15.718	59.962	1.00	17.31
ATOM	249	CB	ALA	30	11.887	14.649	58.925	1.00	16.54
ATOM	250	C	ALA	30	12.343	15.094	61.357	1.00	17.30
ATOM	251	O	ALA	30	11.404	15.171	62.155	1.00	16.42
ATOM	252	N	LYS	31	13.481	14.467	61.634	1.00	16.26
ATOM	253	CA	LYS	31	13.731	13.815	62.918	1.00	17.07
ATOM	254	CB	LYS	31	15.062	13.063	62.852	1.00	18.24
ATOM	255	CG	LYS	31	15.491	12.386	64.146	1.00	24.20
ATOM	256	CD	LYS	31	14.608	11.203	64.469	1.00	27.80
ATOM	257	CE	LYS	31	15.306	10.248	65.425	1.00	30.36
ATOM	258	NZ	LYS	31	15.724	10.913	66.697	1.00	32.82
ATOM	259	C	LYS	31	13.788	14.833	64.057	1.00	17.16

ATOM	260	O	LYS	31	13.250	14.608	65.147	1.00	18.34
ATOM	261	N	LEU	32	14.468	15.941	63.790	1.00	18.82
ATOM	262	CA	LEU	32	14.631	17.019	64.756	1.00	18.15
ATOM	263	CB	LEU	32	15.549	18.097	64.171	1.00	17.24
ATOM	264	CG	LEU	32	16.070	19.200	65.113	1.00	18.88
ATOM	265	CD1	LEU	32	17.356	19.769	64.556	1.00	17.20
ATOM	266	CD2	LEU	32	15.008	20.292	65.280	1.00	18.78
ATOM	267	C	LEU	32	13.272	17.620	65.103	1.00	18.02
ATOM	268	O	LEU	32	12.963	17.847	66.272	1.00	17.18
ATOM	269	N	PHE	33	12.462	17.885	64.083	1.00	17.34
ATOM	270	CA	PHE	33	11.144	18.473	64.316	1.00	18.21
ATOM	271	CB	PHE	33	10.451	18.832	62.995	1.00	15.31
ATOM	272	CG	PHE	33	11.255	19.734	62.092	1.00	14.93
ATOM	273	CD1	PHE	33	12.133	20.689	62.610	1.00	14.65
ATOM	274	CD2	PHE	33	11.093	19.657	60.716	1.00	13.00
ATOM	275	CE1	PHE	33	12.832	21.550	61.764	1.00	13.96
ATOM	276	CE2	PHE	33	11.783	20.510	59.861	1.00	9.75
ATOM	277	CZ	PHE	33	12.657	21.461	60.389	1.00	14.73
ATOM	278	C	PHE	33	10.255	17.503	65.091	1.00	18.11
ATOM	279	O	PHE	33	9.582	17.892	66.048	1.00	17.51
ATOM	280	N	ALA	34	10.246	16.241	64.666	1.00	18.42
ATOM	281	CA	ALA	34	9.433	15.231	65.330	1.00	19.46
ATOM	282	CB	ALA	34	9.573	13.878	64.623	1.00	20.93
ATOM	283	C	ALA	34	9.828	15.098	66.799	1.00	20.01
ATOM	284	O	ALA	34	8.970	15.000	67.673	1.00	19.41
ATOM	285	N	ASP	35	11.125	15.101	67.074	1.00	22.13
ATOM	286	CA	ASP	35	11.574	14.972	68.449	1.00	24.53
ATOM	287	CB	ASP	35	13.086	14.788	68.503	1.00	25.01
ATOM	288	CG	ASP	35	13.522	13.424	67.989	1.00	27.07
ATOM	289	OD1	ASP	35	12.665	12.519	67.898	1.00	28.23
ATOM	290	OD2	ASP	35	14.720	13.261	67.694	1.00	28.18
ATOM	291	C	ASP	35	11.156	16.151	69.324	1.00	23.50
ATOM	292	O	ASP	35	11.086	16.024	70.545	1.00	24.71
ATOM	293	N	GLU	36	10.872	17.294	68.706	1.00	24.53
ATOM	294	CA	GLU	36	10.455	18.469	69.464	1.00	23.98
ATOM	295	CB	GLU	36	11.029	19.743	68.841	1.00	25.45
ATOM	296	CG	GLU	36	12.535	19.876	68.963	1.00	25.52
ATOM	297	CD	GLU	36	13.005	19.750	70.399	1.00	26.66
ATOM	298	OE1	GLU	36	12.385	20.375	71.286	1.00	23.68
ATOM	299	OE2	GLU	36	13.993	19.032	70.637	1.00	27.91
ATOM	300	C	GLU	36	8.937	18.588	69.553	1.00	23.45
ATOM	301	O	GLU	36	8.421	19.502	70.192	1.00	23.61
ATOM	302	N	GLY	37	8.221	17.672	68.908	1.00	22.87
ATOM	303	CA	GLY	37	6.765	17.721	68.955	1.00	22.54
ATOM	304	C	GLY	37	6.096	18.447	67.796	1.00	19.79
ATOM	305	O	GLY	37	4.902	18.741	67.845	1.00	21.78
ATOM	306	N	LEU	38	6.873	18.755	66.765	1.00	19.44
ATOM	307	CA	LEU	38	6.365	19.416	65.569	1.00	19.71
ATOM	308	CB	LEU	38	7.459	20.281	64.952	1.00	20.11
ATOM	309	CG	LEU	38	7.131	21.691	64.458	1.00	22.03
ATOM	310	CD1	LEU	38	8.352	22.238	63.739	1.00	20.65
ATOM	311	CD2	LEU	38	5.918	21.714	63.548	1.00	20.80
ATOM	312	C	LEU	38	6.057	18.222	64.664	1.00	20.90
ATOM	313	O	LEU	38	6.938	17.741	63.939	1.00	18.42
ATOM	314	N	ASN	39	4.807	17.762	64.720	1.00	20.83
ATOM	315	CA	ASN	39	4.355	16.573	63.999	1.00	21.62
ATOM	316	CB	ASN	39	3.489	15.709	64.924	1.00	24.31
ATOM	317	CG	ASN	39	4.128	15.480	66.281	1.00	28.12
ATOM	318	OD1	ASN	39	5.334	15.252	66.377	1.00	28.10
ATOM	319	ND2	ASN	39	3.321	15.526	67.338	1.00	29.42
ATOM	320	C	ASN	39	3.593	16.766	62.696	1.00	19.52
ATOM	321	O	ASN	39	2.955	15.832	62.221	1.00	19.99
ATOM	322	N	VAL	40	3.648	17.961	62.123	1.00	19.39
ATOM	323	CA	VAL	40	2.960	18.221	60.869	1.00	18.52
ATOM	324	CB	VAL	40	1.799	19.213	61.056	1.00	19.51
ATOM	325	CG1	VAL	40	1.113	19.470	59.726	1.00	18.68
ATOM	326	CG2	VAL	40	0.801	18.659	62.066	1.00	18.86
ATOM	327	C	VAL	40	3.967	18.785	59.888	1.00	18.22
ATOM	328	O	VAL	40	4.450	19.910	60.040	1.00	14.68
ATOM	329	N	MET	41	4.280	17.990	58.869	1.00	16.95
ATOM	330	CA	MET	41	5.271	18.398	57.892	1.00	16.29
ATOM	331	CB	MET	41	6.535	17.556	58.082	1.00	16.97
ATOM	332	CG	MET	41	7.255	17.864	59.392	1.00	20.16
ATOM	333	SD	MET	41	8.564	16.706	59.719	1.00	19.46
ATOM	334	CE	MET	41	7.955	15.899	61.206	1.00	21.43
ATOM	335	C	MET	41	4.804	18.342	56.452	1.00	16.56
ATOM	336	O	MET	41	4.046	17.464	56.062	1.00	18.81

ATOM	337	N	LEU	42	5.276	19.300	55.665	1.00	18.90
ATOM	338	CA	LEU	42	4.907	19.383	54.265	1.00	20.11
ATOM	339	CB	LEU	42	4.178	20.707	54.016	1.00	22.93
ATOM	340	CG	LEU	42	3.677	21.143	52.630	1.00	26.24
ATOM	341	CD1	LEU	42	4.777	21.879	51.907	1.00	29.83
ATOM	342	CD2	LEU	42	3.169	19.955	51.818	1.00	24.10
ATOM	343	C	LEU	42	6.120	19.258	53.344	1.00	19.47
ATOM	344	O	LEU	42	7.106	19.978	53.488	1.00	17.61
ATOM	345	N	VAL	43	6.045	18.313	52.414	1.00	19.14
ATOM	346	CA	VAL	43	7.102	18.116	51.429	1.00	18.25
ATOM	347	CB	VAL	43	7.332	16.624	51.126	1.00	19.90
ATOM	348	CG1	VAL	43	8.397	16.461	50.041	1.00	19.97
ATOM	349	CG2	VAL	43	7.752	15.895	52.395	1.00	19.98
ATOM	350	C	VAL	43	6.517	18.806	50.208	1.00	18.93
ATOM	351	O	VAL	43	5.815	18.187	49.408	1.00	17.33
ATOM	352	N	GLY	44	6.786	20.102	50.089	1.00	17.93
ATOM	353	CA	GLY	44	6.248	20.865	48.980	1.00	20.04
ATOM	354	C	GLY	44	7.226	21.095	47.854	1.00	18.04
ATOM	355	O	GLY	44	8.430	20.872	48.008	1.00	17.40
ATOM	356	N	ASP	45	6.715	21.557	46.718	1.00	18.65
ATOM	357	CA	ASP	45	7.583	21.796	45.575	1.00	20.74
ATOM	358	CB	ASP	45	6.764	21.936	44.279	1.00	21.58
ATOM	359	CG	ASP	45	5.684	22.997	44.372	1.00	23.34
ATOM	360	OD1	ASP	45	5.672	23.751	45.359	1.00	22.56
ATOM	361	OD2	ASP	45	4.858	23.074	43.442	1.00	21.88
ATOM	362	C	ASP	45	8.483	23.007	45.776	1.00	19.43
ATOM	363	O	ASP	45	9.243	23.374	44.883	1.00	19.95
ATOM	364	N	SER	46	8.408	23.635	46.949	1.00	20.64
ATOM	365	CA	SER	46	9.285	24.772	47.211	1.00	19.31
ATOM	366	CB	SER	46	8.944	25.429	48.551	1.00	19.58
ATOM	367	OG	SER	46	9.146	24.533	49.628	1.00	20.11
ATOM	368	C	SER	46	10.705	24.206	47.243	1.00	19.27
ATOM	369	O	SER	46	11.686	24.945	47.155	1.00	20.36
ATOM	370	N	LEU	47	10.810	22.884	47.365	1.00	18.59
ATOM	371	CA	LEU	47	12.119	22.237	47.384	1.00	19.25
ATOM	372	CB	LEU	47	11.970	20.737	47.661	1.00	18.00
ATOM	373	CG	LEU	47	11.308	19.853	46.597	1.00	17.40
ATOM	374	CD1	LEU	47	12.309	19.517	45.489	1.00	15.15
ATOM	375	CD2	LEU	47	10.822	18.572	47.255	1.00	16.79
ATOM	376	C	LEU	47	12.853	22.467	46.063	1.00	17.82
ATOM	377	O	LEU	47	14.083	22.399	46.004	1.00	17.99
ATOM	378	N	GLY	48	12.100	22.742	45.001	1.00	17.81
ATOM	379	CA	GLY	48	12.720	22.997	43.708	1.00	16.18
ATOM	380	C	GLY	48	13.659	24.186	43.784	1.00	18.66
ATOM	381	O	GLY	48	14.644	24.271	43.050	1.00	17.89
ATOM	382	N	MET	49	13.356	25.108	44.691	1.00	19.84
ATOM	383	CA	MET	49	14.172	26.303	44.865	1.00	20.69
ATOM	384	CB	MET	49	13.263	27.515	45.100	1.00	23.46
ATOM	385	CG	MET	49	12.312	27.789	43.940	1.00	25.97
ATOM	386	SD	MET	49	11.099	29.069	44.266	1.00	31.34
ATOM	387	CE	MET	49	12.037	30.520	43.900	1.00	32.33
ATOM	388	C	MET	49	15.162	26.153	46.022	1.00	20.49
ATOM	389	O	MET	49	16.370	26.292	45.837	1.00	22.08
ATOM	390	N	THR	50	14.649	25.846	47.208	1.00	21.41
ATOM	391	CA	THR	50	15.492	25.702	48.387	1.00	21.56
ATOM	392	CB	THR	50	14.636	25.608	49.655	1.00	25.24
ATOM	393	OG1	THR	50	15.493	25.523	50.801	1.00	31.31
ATOM	394	CG2	THR	50	13.750	24.381	49.600	1.00	23.80
ATOM	395	C	THR	50	16.432	24.498	48.362	1.00	21.30
ATOM	396	O	THR	50	17.551	24.565	48.864	1.00	21.10
ATOM	397	N	VAL	51	15.975	23.391	47.787	1.00	18.20
ATOM	398	CA	VAL	51	16.812	22.200	47.719	1.00	19.81
ATOM	399	CB	VAL	51	15.997	20.918	47.983	1.00	18.02
ATOM	400	CG1	VAL	51	16.909	19.695	47.900	1.00	23.01
ATOM	401	CG2	VAL	51	15.355	20.983	49.365	1.00	21.92
ATOM	402	C	VAL	51	17.536	22.038	46.384	1.00	18.45
ATOM	403	O	VAL	51	18.755	21.867	46.351	1.00	16.95
ATOM	404	N	GLN	52	16.788	22.087	45.286	1.00	17.92
ATOM	405	CA	GLN	52	17.381	21.907	43.963	1.00	18.16
ATOM	406	CB	GLN	52	16.312	21.427	42.976	1.00	17.32
ATOM	407	CG	GLN	52	15.529	20.227	43.482	1.00	16.59
ATOM	408	CD	GLN	52	14.477	19.771	42.504	1.00	15.57
ATOM	409	OE1	GLN	52	14.011	20.552	41.673	1.00	16.27
ATOM	410	NE2	GLN	52	14.084	18.504	42.600	1.00	14.83
ATOM	411	C	GLN	52	18.076	23.150	43.411	1.00	18.00
ATOM	412	O	GLN	52	19.003	23.052	42.606	1.00	18.07
ATOM	413	N	GLY	53	17.624	24.324	43.831	1.00	19.93

```
ATOM   414  CA   GLY   53      18.248  25.549  43.361  1.00 20.83
ATOM   415  C    GLY   53      17.685  26.146  42.085  1.00 22.32
ATOM   416  O    GLY   53      18.387  26.877  41.387  1.00 24.49
ATOM   417  N    HIS   54      16.429  25.849  41.771  1.00 22.93
ATOM   418  CA   HIS   54      15.803  26.397  40.575  1.00 24.27
ATOM   419  CB   HIS   54      14.725  25.438  40.049  1.00 23.64
ATOM   420  CG   HIS   54      15.264  24.127  39.568  1.00 25.03
ATOM   421  CD2  HIS   54      15.030  22.860  39.984  1.00 25.14
ATOM   422  ND1  HIS   54      16.175  24.029  38.538  1.00 25.82
ATOM   423  CE1  HIS   54      16.481  22.759  38.343  1.00 26.94
ATOM   424  NE2  HIS   54      15.800  22.029  39.208  1.00 26.01
ATOM   425  C    HIS   54      15.176  27.748  40.914  1.00 25.18
ATOM   426  O    HIS   54      14.947  28.058  42.086  1.00 24.14
ATOM   427  N    ASP   55      14.898  28.545  39.884  1.00 25.82
ATOM   428  CA   ASP   55      14.302  29.869  40.062  1.00 27.59
ATOM   429  CB   ASP   55      14.550  30.729  38.813  1.00 30.40
ATOM   430  CG   ASP   55      13.786  30.232  37.600  1.00 33.05
ATOM   431  OD1  ASP   55      12.535  30.266  37.622  1.00 36.66
ATOM   432  OD2  ASP   55      14.428  29.804  36.618  1.00 37.40
ATOM   433  C    ASP   55      12.801  29.778  40.333  1.00 26.78
ATOM   434  O    ASP   55      12.174  30.755  40.737  1.00 27.57
ATOM   435  N    SER   56      12.228  28.600  40.099  1.00 25.17
ATOM   436  CA   SER   56      10.802  28.386  40.322  1.00 21.97
ATOM   437  CB   SER   56      10.008  28.635  39.036  1.00 21.35
ATOM   438  OG   SER   56      10.232  27.608  38.084  1.00 21.31
ATOM   439  C    SER   56      10.582  26.956  40.795  1.00 20.02
ATOM   440  O    SER   56      11.529  26.177  40.903  1.00 21.16
ATOM   441  N    THR   57       9.334  26.615  41.084  1.00 19.01
ATOM   442  CA   THR   57       9.007  25.272  41.543  1.00 19.21
ATOM   443  CB   THR   57       7.869  25.305  42.579  1.00 19.53
ATOM   444  OG1  THR   57       6.686  25.840  41.972  1.00 20.97
ATOM   445  CG2  THR   57       8.249  26.179  43.772  1.00 19.07
ATOM   446  C    THR   57       8.560  24.359  40.396  1.00 18.44
ATOM   447  O    THR   57       8.422  23.153  40.587  1.00 18.34
ATOM   448  N    LEU   58       8.341  24.930  39.212  1.00 20.59
ATOM   449  CA   LEU   58       7.868  24.149  38.062  1.00 20.34
ATOM   450  CB   LEU   58       7.720  25.029  36.816  1.00 20.92
ATOM   451  CG   LEU   58       6.542  26.005  36.785  1.00 23.24
ATOM   452  CD1  LEU   58       6.926  27.242  37.578  1.00 25.30
ATOM   453  CD2  LEU   58       6.195  26.393  35.349  1.00 23.02
ATOM   454  C    LEU   58       8.687  22.913  37.696  1.00 21.07
ATOM   455  O    LEU   58       8.120  21.868  37.366  1.00 19.23
ATOM   456  N    PRO   59      10.025  23.015  37.731  1.00 20.10
ATOM   457  CD   PRO   59      10.845  24.213  37.965  1.00 23.05
ATOM   458  CA   PRO   59      10.862  21.860  37.392  1.00 21.47
ATOM   459  CB   PRO   59      12.286  22.433  37.427  1.00 21.53
ATOM   460  CG   PRO   59      12.167  23.617  38.335  1.00 25.99
ATOM   461  C    PRO   59      10.678  20.653  38.307  1.00 18.05
ATOM   462  O    PRO   59      11.041  19.534  37.946  1.00 18.36
ATOM   463  N    VAL   60      10.100  20.865  39.486  1.00 17.05
ATOM   464  CA   VAL   60       9.882  19.760  40.423  1.00 16.87
ATOM   465  CB   VAL   60       9.330  20.273  41.785  1.00 15.81
ATOM   466  CG1  VAL   60       9.046  19.099  42.709  1.00 15.77
ATOM   467  CG2  VAL   60      10.336  21.201  42.438  1.00 15.49
ATOM   468  C    VAL   60       8.894  18.740  39.852  1.00 17.60
ATOM   469  O    VAL   60       7.805  19.099  39.406  1.00 16.90
ATOM   470  N    THR   61       9.267  17.465  39.876  1.00 18.90
ATOM   471  CA   THR   61       8.389  16.420  39.352  1.00 20.57
ATOM   472  CB   THR   61       9.124  15.590  38.252  1.00 24.68
ATOM   473  OG1  THR   61       9.451  16.440  37.146  1.00 30.75
ATOM   474  CG2  THR   61       8.261  14.425  37.760  1.00 30.08
ATOM   475  C    THR   61       7.906  15.507  40.487  1.00 17.77
ATOM   476  O    THR   61       8.408  15.581  41.606  1.00 16.02
ATOM   477  N    VAL   62       6.919  14.662  40.196  1.00 15.87
ATOM   478  CA   VAL   62       6.360  13.734  41.177  1.00 15.01
ATOM   479  CB   VAL   62       5.269  12.834  40.532  1.00 13.13
ATOM   480  CG1  VAL   62       4.831  11.742  41.512  1.00 13.60
ATOM   481  CG2  VAL   62       4.070  13.696  40.116  1.00 13.51
ATOM   482  C    VAL   62       7.428  12.837  41.784  1.00 15.22
ATOM   483  O    VAL   62       7.390  12.529  42.978  1.00 16.66
ATOM   484  N    ALA   63       8.383  12.412  40.965  1.00 15.74
ATOM   485  CA   ALA   63       9.445  11.551  41.467  1.00 14.86
ATOM   486  CB   ALA   63      10.383  11.137  40.319  1.00 16.20
ATOM   487  C    ALA   63      10.230  12.264  42.562  1.00 13.05
ATOM   488  O    ALA   63      10.579  11.655  43.573  1.00 13.87
ATOM   489  N    ASP   64      10.505  13.551  42.363  1.00 14.03
ATOM   490  CA   ASP   64      11.258  14.319  43.357  1.00 14.19
```

ATOM	491	CB	ASP	64	11.507	15.762	42.890	1.00	13.98
ATOM	492	CG	ASP	64	12.309	15.849	41.605	1.00	14.58
ATOM	493	OD1	ASP	64	13.170	14.975	41.351	1.00	15.44
ATOM	494	OD2	ASP	64	12.093	16.829	40.846	1.00	17.47
ATOM	495	C	ASP	64	10.492	14.355	44.679	1.00	14.42
ATOM	496	O	ASP	64	11.072	14.125	45.740	1.00	12.00
ATOM	497	N	ILE	65	9.194	14.649	44.618	1.00	13.48
ATOM	498	CA	ILE	65	8.374	14.705	45.827	1.00	13.80
ATOM	499	CB	ILE	65	6.899	15.082	45.504	1.00	11.05
ATOM	500	CG2	ILE	65	6.042	14.958	46.773	1.00	13.85
ATOM	501	CG1	ILE	65	6.822	16.488	44.929	1.00	14.20
ATOM	502	CD1	ILE	65	7.176	17.602	45.914	1.00	13.32
ATOM	503	C	ILE	65	8.382	13.359	46.551	1.00	12.47
ATOM	504	O	ILE	65	8.502	13.294	47.769	1.00	13.03
ATOM	505	N	ALA	66	8.252	12.279	45.786	1.00	12.41
ATOM	506	CA	ALA	66	8.217	10.933	46.356	1.00	9.78
ATOM	507	CB	ALA	66	7.938	9.913	45.252	1.00	9.59
ATOM	508	C	ALA	66	9.518	10.582	47.077	1.00	11.07
ATOM	509	O	ALA	66	9.529	9.899	48.103	1.00	11.14
ATOM	510	N	TYR	67	10.619	11.023	46.492	1.00	11.42
ATOM	511	CA	TYR	67	11.944	10.790	47.048	1.00	12.07
ATOM	512	CB	TYR	67	12.977	11.335	46.061	1.00	11.65
ATOM	513	CG	TYR	67	14.394	11.327	46.566	1.00	13.46
ATOM	514	CD1	TYR	67	15.120	10.146	46.641	1.00	13.65
ATOM	515	CE1	TYR	67	16.441	10.144	47.081	1.00	15.17
ATOM	516	CD2	TYR	67	15.018	12.515	46.949	1.00	16.34
ATOM	517	CE2	TYR	67	16.333	12.529	47.389	1.00	13.50
ATOM	518	CZ	TYR	67	17.039	11.340	47.451	1.00	16.29
ATOM	519	OH	TYR	67	18.351	11.348	47.874	1.00	16.32
ATOM	520	C	TYR	67	12.082	11.487	48.414	1.00	12.63
ATOM	521	O	TYR	67	12.501	10.878	49.406	1.00	12.25
ATOM	522	N	HIS	68	11.713	12.765	48.455	1.00	14.09
ATOM	523	CA	HIS	68	11.814	13.548	49.688	1.00	13.34
ATOM	524	CB	HIS	68	11.723	15.039	49.358	1.00	12.95
ATOM	525	CG	HIS	68	12.930	15.561	48.644	1.00	13.09
ATOM	526	CD2	HIS	68	13.146	15.833	47.335	1.00	13.59
ATOM	527	ND1	HIS	68	14.128	15.794	49.285	1.00	11.39
ATOM	528	CE1	HIS	68	15.030	16.185	48.403	1.00	13.50
ATOM	529	NE2	HIS	68	14.461	16.217	47.211	1.00	14.36
ATOM	530	C	HIS	68	10.771	13.147	50.722	1.00	14.18
ATOM	531	O	HIS	68	11.002	13.282	51.929	1.00	12.96
ATOM	532	N	THR	69	9.631	12.651	50.247	1.00	13.76
ATOM	533	CA	THR	69	8.572	12.193	51.125	1.00	12.86
ATOM	534	CB	THR	69	7.291	11.816	50.321	1.00	13.67
ATOM	535	OG1	THR	69	6.692	13.004	49.794	1.00	13.10
ATOM	536	CG2	THR	69	6.290	11.098	51.200	1.00	13.21
ATOM	537	C	THR	69	9.080	10.957	51.877	1.00	12.94
ATOM	538	O	THR	69	8.891	10.837	53.086	1.00	13.96
ATOM	539	N	ALA	70	9.736	10.045	51.166	1.00	12.91
ATOM	540	CA	ALA	70	10.266	8.840	51.795	1.00	12.85
ATOM	541	CB	ALA	70	10.905	7.924	50.743	1.00	-16.07
ATOM	542	C	ALA	70	11.285	9.166	52.893	1.00	13.23
ATOM	543	O	ALA	70	11.278	-8.543	53.959	1.00	12.96
ATOM	544	N	ALA	71	12.157	10.136	52.635	1.00	13.50
ATOM	545	CA	ALA	71	13.174	10.519	53.613	1.00	13.45
ATOM	546	CB	ALA	71	14.166	11.480	52.984	1.00	14.53
ATOM	547	C	ALA	71	12.539	11.153	54.845	1.00	14.10
ATOM	548	O	ALA	71	12.935	10.876	55.981	1.00	14.47
ATOM	549	N	VAL	72	11.542	11.999	54.622	1.00	14.55
ATOM	550	CA	VAL	72	10.861	12.654	55.736	1.00	15.46
ATOM	551	CB	VAL	72	9.830	13.682	55.227	1.00	16.14
ATOM	552	CG1	VAL	72	9.000	14.217	56.394	1.00	16.03
ATOM	553	CG2	VAL	72	10.540	14.808	54.509	1.00	16.34
ATOM	554	C	VAL	72	10.153	11.606	56.590	1.00	15.16
ATOM	555	O	VAL	72	10.183	11.668	57.824	1.00	14.69
ATOM	556	N	ARG	73	9.522	10.633	55.936	1.00	14.57
ATOM	557	CA	ARG	73	8.815	9.593	56.669	1.00	12.67
ATOM	558	CB	ARG	73	8.060	8.654	55.719	1.00	13.42
ATOM	559	CG	ARG	73	7.356	7.508	56.447	1.00	12.53
ATOM	560	CD	ARG	73	6.380	8.015	57.520	1.00	16.45
ATOM	561	NE	ARG	73	5.237	8.713	56.933	1.00	16.27
ATOM	562	CZ	ARG	73	4.358	9.437	57.617	1.00	17.72
ATOM	563	NH1	ARG	73	4.479	9.573	58.934	1.00	13.94
ATOM	564	NH2	ARG	73	3.353	10.027	56.982	1.00	16.25
ATOM	565	C	ARG	73	9.748	8.767	57.540	1.00	12.87
ATOM	566	O	ARG	73	9.369	8.343	58.631	1.00	13.64
ATOM	567	N	ARG	74	10.963	8.524	57.057	1.00	14.65

ATOM	568	CA	ARG	74	11.926	7.738	57.823	1.00	13.53
ATOM	569	CB	ARG	74	13.155	7.405	56.975	1.00	15.28
ATOM	570	CG	ARG	74	12.860	6.543	55.752	1.00	16.51
ATOM	571	CD	ARG	74	14.133	5.937	55.155	1.00	17.73
ATOM	572	NE	ARG	74	13.895	5.341	53.838	1.00	20.82
ATOM	573	CZ	ARG	74	13.896	6.020	52.694	1.00	22.35
ATOM	574	NH1	ARG	74	14.127	7.325	52.688	1.00	23.90
ATOM	575	NH2	ARG	74	13.656	5.397	51.552	1.00	27.63
ATOM	576	C	ARG	74	12.355	8.513	59.052	1.00	16.13
ATOM	577	O	ARG	74	12.673	7.932	60.093	1.00	16.86
ATOM	578	N	GLY	75	12.359	9.834	58.923	1.00	16.62
ATOM	579	CA	GLY	75	12.753	10.681	60.035	1.00	17.65
ATOM	580	C	GLY	75	11.629	10.935	61.019	1.00	17.81
ATOM	581	O	GLY	75	11.865	11.107	62.215	1.00	17.98
ATOM	582	N	ALA	76	10.398	10.952	60.525	1.00	17.56
ATOM	583	CA	ALA	76	9.240	11.210	61.385	1.00	17.19
ATOM	584	CB	ALA	76	8.767	12.640	61.173	1.00	16.95
ATOM	585	C	ALA	76	8.108	10.229	61.094	1.00	18.56
ATOM	586	O	ALA	76	7.100	10.590	60.492	1.00	18.58
ATOM	587	N	PRO	77	8.255	8.976	61.549	1.00	20.24
ATOM	588	CD	PRO	77	9.361	8.507	62.400	1.00	21.81
ATOM	589	CA	PRO	77	7.271	7.908	61.348	1.00	20.91
ATOM	590	CB	PRO	77	7.949	6.698	61.982	1.00	22.03
ATOM	591	CG	PRO	77	8.749	7.303	63.072	1.00	25.30
ATOM	592	C	PRO	77	5.870	8.138	61.902	1.00	20.81
ATOM	593	O	PRO	77	4.929	7.462	61.488	1.00	20.60
ATOM	594	N	ASN	78	5.720	9.080	62.828	1.00	19.26
ATOM	595	CA	ASN	78	4.402	9.342	63.399	1.00	20.69
ATOM	596	CB	ASN	78	4.449	9.242	64.932	1.00	22.75
ATOM	597	CG	ASN	78	4.554	7.806	65.414	1.00	27.00
ATOM	598	OD1	ASN	78	3.772	6.951	65.001	1.00	31.16
ATOM	599	ND2	ASN	78	5.515	7.534	66.287	1.00	29.98
ATOM	600	C	ASN	78	3.821	10.693	62.992	1.00	19.38
ATOM	601	O	ASN	78	2.750	11.076	63.456	1.00	21.43
ATOM	602	N	CYS	79	4.507	11.399	62.104	1.00	17.77
ATOM	603	CA	CYS	79	4.040	12.713	61.686	1.00	19.13
ATOM	604	CB	CYS	79	5.210	13.553	61.150	1.00	19.79
ATOM	605	SG	CYS	79	5.646	13.275	59.389	1.00	24.05
ATOM	606	C	CYS	79	2.938	12.667	60.633	1.00	19.96
ATOM	607	O	CYS	79	2.735	11.652	59.961	1.00	17.94
ATOM	608	N	LEU	80	2.202	13.770	60.528	1.00	19.53
ATOM	609	CA	LEU	80	1.163	13.904	59.519	1.00	19.26
ATOM	610	CB	LEU	80	0.054	14.860	59.978	1.00	20.96
ATOM	611	CG	LEU	80	-0.984	15.225	58.909	1.00	21.27
ATOM	612	CD1	LEU	80	-1.670	13.967	58.396	1.00	22.20
ATOM	613	CD2	LEU	80	-2.008	16.195	59.488	1.00	22.16
ATOM	614	C	LEU	80	1.962	14.527	58.387	1.00	18.90
ATOM	615	O	LEU	80	2.442	15.655	58.509	1.00	18.11
ATOM	616	N	LEU	81	2.120	13.788	57.294	1.00	15.94
ATOM	617	CA	LEU	81	2.924	14.261	56.181	1.00	16.28
ATOM	618	CB	LEU	81	3.930	13.169	55.775	1.00	18.46
ATOM	619	CG	LEU	81	5.213	13.532	55.008	1.00	18.26
ATOM	620	CD1	LEU	81	6.102	12.304	54.937	1.00	18.48
ATOM	621	CD2	LEU	81	4.884	14.038	53.605	1.00	21.41
ATOM	622	C	LEU	81	2.090	14.669	54.986	1.00	16.06
ATOM	623	O	LEU	81	1.357	13.857	54.417	1.00	16.48
ATOM	624	N	LEU	82	2.183	15.944	54.628	1.00	16.31
ATOM	625	CA	LEU	82	1.457	16.466	53.477	1.00	17.30
ATOM	626	CB	LEU	82	0.897	17.859	53.766	1.00	19.25
ATOM	627	CG	LEU	82	-0.451	17.985	54.495	1.00	22.19
ATOM	628	CD1	LEU	82	-0.449	17.200	55.792	1.00	21.32
ATOM	629	CD2	LEU	82	-0.720	19.462	54.750	1.00	21.16
ATOM	630	C	LEU	82	2.458	16.557	52.342	1.00	17.89
ATOM	631	O	LEU	82	3.560	17.068	52.531	1.00	18.88
ATOM	632	N	ALA	83	2.092	16.053	51.171	1.00	16.82
ATOM	633	CA	ALA	83	2.997	16.114	50.033	1.00	16.39
ATOM	634	CB	ALA	83	3.406	14.720	49.607	1.00	16.49
ATOM	635	C	ALA	83	2.337	16.841	48.881	1.00	14.35
ATOM	636	O	ALA	83	1.186	16.579	48.554	1.00	14.15
ATOM	637	N	ASP	84	3.058	17.775	48.274	1.00	13.95
ATOM	638	CA	ASP	84	2.498	18.505	47.148	1.00	16.00
ATOM	639	CB	ASP	84	3.268	19.799	46.893	1.00	22.80
ATOM	640	CG	ASP	84	2.767	20.957	47.723	1.00	24.54
ATOM	641	OD1	ASP	84	1.548	21.195	47.752	1.00	30.38
ATOM	642	OD2	ASP	84	3.602	21.644	48.329	1.00	32.60
ATOM	643	C	ASP	84	2.526	17.716	45.851	1.00	16.16
ATOM	644	O	ASP	84	3.400	16.875	45.640	1.00	14.13

```
ATOM    645   N    LEU   85      1.535   17.967   44.998   1.00  15.10
ATOM    646   CA   LEU   85      1.539   17.381   43.667   1.00  15.19
ATOM    647   CB   LEU   85      0.127   17.043   43.167   1.00  16.96
ATOM    648   CG   LEU   85     -0.451   15.751   43.751   1.00  17.98
ATOM    649   CD1  LEU   85     -1.753   15.360   43.028   1.00  17.36
ATOM    650   CD2  LEU   85      0.574   14.639   43.604   1.00  17.58
ATOM    651   C    LEU   85      2.111   18.593   42.937   1.00  14.95
ATOM    652   O    LEU   85      1.563   19.694   43.024   1.00  15.92
ATOM    653   N    PRO   86      3.255   18.419   42.262   1.00  14.05
ATOM    654   CD   PRO   86      3.984   17.143   42.170   1.00  15.98
ATOM    655   CA   PRO   86      3.949   19.473   41.518   1.00  15.84
ATOM    656   CB   PRO   86      5.306   18.839   41.224   1.00  16.60
ATOM    657   CG   PRO   86      4.933   17.386   41.018   1.00  16.94
ATOM    658   C    PRO   86      3.249   19.970   40.255   1.00  17.90
ATOM    659   O    PRO   86      2.161   19.515   39.899   1.00  17.49
ATOM    660   N    PHE   87      3.897   20.917   39.591   1.00  17.02
ATOM    661   CA   PHE   87      3.386   21.509   38.371   1.00  18.00
ATOM    662   CB   PHE   87      4.486   22.357   37.728   1.00  19.87
ATOM    663   CG   PHE   87      4.125   22.906   36.383   1.00  19.63
ATOM    664   CD1  PHE   87      3.025   23.739   36.229   1.00  19.99
ATOM    665   CD2  PHE   87      4.893   22.588   35.265   1.00  20.71
ATOM    666   CE1  PHE   87      2.692   24.249   34.982   1.00  21.55
ATOM    667   CE2  PHE   87      4.567   23.095   34.012   1.00  20.03
ATOM    668   CZ   PHE   87      3.466   23.926   33.870   1.00  21.84
ATOM    669   C    PHE   87      2.871   20.467   37.373   1.00  17.52
ATOM    670   O    PHE   87      3.561   19.495   37.051   1.00  16.53
ATOM    671   N    MET   88      1.644   20.682   36.909   1.00  16.65
ATOM    672   CA   MET   88      0.984   19.816   35.936   1.00  18.63
ATOM    673   CB   MET   88      1.666   19.944   34.575   1.00  20.77
ATOM    674   CG   MET   88      0.767   19.578   33.413   1.00  22.54
ATOM    675   SD   MET   88     -0.593   20.732   33.216   1.00  21.14
ATOM    676   CE   MET   88      0.111   21.920   32.099   1.00  22.91
ATOM    677   C    MET   88      0.931   18.340   36.326   1.00  19.33
ATOM    678   O    MET   88      0.987   17.463   35.461   1.00  22.28
ATOM    679   N    ALA   89      0.822   18.062   37.619   1.00  17.87
ATOM    680   CA   ALA   89      0.749   16.685   38.086   1.00  17.24
ATOM    681   CB   ALA   89      1.609   16.506   39.333   1.00  18.47
ATOM    682   C    ALA   89     -0.701   16.285   38.379   1.00  16.90
ATOM    683   O    ALA   89     -0.978   15.164   38.816   1.00  17.43
ATOM    684   N    TYR   90     -1.624   17.209   38.145   1.00  16.10
ATOM    685   CA   TYR   90     -3.041   16.942   38.364   1.00  15.59
ATOM    686   CB   TYR   90     -3.452   17.350   39.790   1.00  14.88
ATOM    687   CG   TYR   90     -2.959   18.715   40.223   1.00  15.60
ATOM    688   CD1  TYR   90     -3.753   19.854   40.064   1.00  17.89
ATOM    689   CE1  TYR   90     -3.288   21.117   40.454   1.00  17.95
ATOM    690   CD2  TYR   90     -1.690   18.870   40.782   1.00  17.54
ATOM    691   CE2  TYR   90     -1.217   20.122   41.173   1.00  17.49
ATOM    692   CZ   TYR   90     -2.016   21.235   41.008   1.00  18.23
ATOM    693   OH   TYR   90     -1.543   22.470   41.404   1.00  19.18
ATOM    694   C    TYR   90     -3.885   17.666   37.322   1.00  15.82
ATOM    695   O    TYR   90     -4.937   18.225   37.628   1.00  17.20
ATOM    696   N    ALA   91     -3.412   17.628   36.079   1.00  16.74
ATOM    697   CA   ALA   91     -4.085   18.272   34.959   1.00  17.95
ATOM    698   CB   ALA   91     -3.177   18.262   33.731   1.00  18.19
ATOM    699   C    ALA   91     -5.425   17.611   34.631   1.00  17.59
ATOM    700   O    ALA   91     -6.289   18.230   34.010   1.00  16.62
ATOM    701   N    THR   92     -5.580   16.347   35.015   1.00  16.91
ATOM    702   CA   THR   92     -6.838   15.619   34.811   1.00  15.64
ATOM    703   CB   THR   92     -6.821   14.689   33.566   1.00  17.31
ATOM    704   OG1  THR   92     -5.942   13.582   33.804   1.00  15.34
ATOM    705   CG2  THR   92     -6.369   15.438   32.322   1.00  15.98
ATOM    706   C    THR   92     -7.052   14.720   36.021   1.00  16.55
ATOM    707   O    THR   92     -6.097   14.366   36.711   1.00  17.07
ATOM    708   N    PRO   93     -8.310   14.339   36.299   1.00  16.42
ATOM    709   CD   PRO   93     -9.570   14.771   35.669   1.00  17.40
ATOM    710   CA   PRO   93     -8.568   13.470   37.447   1.00  15.13
ATOM    711   CB   PRO   93    -10.056   13.168   37.312   1.00  17.06
ATOM    712   CG   PRO   93    -10.589   14.464   36.750   1.00  16.77
ATOM    713   C    PRO   93     -7.696   12.210   37.411   1.00  16.09
ATOM    714   O    PRO   93     -7.028   11.879   38.396   1.00  13.79
ATOM    715   N    GLU   94     -7.689   11.517   36.273   1.00  16.39
ATOM    716   CA   GLU   94     -6.882   10.305   36.120   1.00  17.29
ATOM    717   CB   GLU   94     -6.948    9.791   34.680   1.00  20.57
ATOM    718   CG   GLU   94     -8.040    8.779   34.426   1.00  27.03
ATOM    719   CD   GLU   94     -7.968    8.209   33.024   1.00  30.80
ATOM    720   OE1  GLU   94     -6.908    7.660   32.659   1.00  34.96
ATOM    721   OE2  GLU   94     -8.965    8.309   32.285   1.00  36.52
```

ATOM	722	C	GLU	94	-5.418	10.492	36.497	1.00	17.89
ATOM	723	O	GLU	94	-4.846	9.658	37.194	1.00	16.77
ATOM	724	N	GLN	95	-4.806	11.573	36.029	1.00	15.83
ATOM	725	CA	GLN	95	-3.408	11.811	36.350	1.00	16.28
ATOM	726	CB	GLN	95	-2.845	12.932	35.491	1.00	18.34
ATOM	727	CG	GLN	95	-2.936	12.662	34.002	1.00	24.91
ATOM	728	CD	GLN	95	-2.424	13.826	33.189	1.00	29.82
ATOM	729	OE1	GLN	95	-1.215	14.043	33.081	1.00	31.53
ATOM	730	NE2	GLN	95	-3.347	14.606	32.632	1.00	31.62
ATOM	731	C	GLN	95	-3.232	12.144	37.817	1.00	13.83
ATOM	732	O	GLN	95	-2.245	11.743	38.422	1.00	14.18
ATOM	733	N	ALA	96	-4.173	12.888	38.393	1.00	12.99
ATOM	734	CA	ALA	96	-4.071	13.213	39.813	1.00	11.89
ATOM	735	CB	ALA	96	-5.229	14.113	40.243	1.00	10.87
ATOM	736	C	ALA	96	-4.090	11.911	40.611	1.00	12.60
ATOM	737	O	ALA	96	-3.311	11.746	41.549	1.00	11.80
ATOM	738	N	PHE	97	-4.970	10.979	40.236	1.00	12.82
ATOM	739	CA	PHE	97	-5.050	9.709	40.956	1.00	13.08
ATOM	740	CB	PHE	97	-6.072	8.741	40.332	1.00	13.33
ATOM	741	CG	PHE	97	-7.459	9.303	40.173	1.00	14.06
ATOM	742	CD1	PHE	97	-7.975	10.220	41.079	1.00	14.07
ATOM	743	CD2	PHE	97	-8.254	8.891	39.113	1.00	13.38
ATOM	744	CE1	PHE	97	-9.273	10.725	40.931	1.00	11.22
ATOM	745	CE2	PHE	97	-9.556	9.385	38.948	1.00	13.40
ATOM	746	CZ	PHE	97	-10.061	10.302	39.859	1.00	11.20
ATOM	747	C	PHE	97	-3.699	8.990	40.975	1.00	13.62
ATOM	748	O	PHE	97	-3.244	8.552	42.026	1.00	13.09
ATOM	749	N	GLU	98	-3.064	8.856	39.815	1.00	14.92
ATOM	750	CA	GLU	98	-1.786	8.154	39.768	1.00	16.75
ATOM	751	CB	GLU	98	-1.356	7.859	38.327	1.00	20.44
ATOM	752	CG	GLU	98	-0.045	7.064	38.268	1.00	28.53
ATOM	753	CD	GLU	98	-0.113	5.768	39.066	1.00	33.54
ATOM	754	OE1	GLU	98	-0.767	4.810	38.587	1.00	35.57
ATOM	755	OE2	GLU	98	0.472	5.706	40.187	1.00	34.76
ATOM	756	C	GLU	98	-0.660	8.888	40.480	1.00	14.28
ATOM	757	O	GLU	98	0.134	8.275	41.198	1.00	14.65
ATOM	758	N	ASN	99	-0.580	10.196	40.294	1.00	12.45
ATOM	759	CA	ASN	99	0.490	10.944	40.941	1.00	11.69
ATOM	760	CB	ASN	99	0.627	12.329	40.299	1.00	11.89
ATOM	761	CG	ASN	99	1.172	12.238	38.890	1.00	12.59
ATOM	762	OD1	ASN	99	2.019	11.384	38.609	1.00	13.02
ATOM	763	ND2	ASN	99	0.707	13.105	38.002	1.00	13.56
ATOM	764	C	ASN	99	0.286	11.026	42.451	1.00	13.55
ATOM	765	O	ASN	99	1.256	10.953	43.216	1.00	11.87
ATOM	766	N	ALA	100	-0.970	11.157	42.879	1.00	12.15
ATOM	767	CA	ALA	100	-1.284	11.189	44.306	1.00	14.14
ATOM	768	CB	ALA	100	-2.777	11.489	44.531	1.00	13.05
ATOM	769	C	ALA	100	-0.940	9.814	44.878	1.00	12.60
ATOM	770	O	ALA	100	-0.347	9.709	45.953	1.00	13.66
ATOM	771	N	ALA	101	-1.312	8.748	44.175	1.00	12.06
ATOM	772	CA	ALA	101	-0.999	7.412	44.679	1.00	10.87
ATOM	773	CB	ALA	101	-1.590	6.338	43.755	1.00	10.90
ATOM	774	C	ALA	101	0.517	7.204	44.853	1.00	10.31
ATOM	775	O	ALA	101	0.953	6.543	45.794	1.00	12.24
ATOM	776	N	THR	102	1.322	7.766	43.958	1.00	10.77
ATOM	777	CA	THR	102	2.781	7.606	44.046	1.00	10.62
ATOM	778	CB	THR	102	3.450	8.244	42.833	1.00	11.82
ATOM	779	OG1	THR	102	3.011	7.556	41.648	1.00	12.54
ATOM	780	CG2	THR	102	4.965	8.143	42.934	1.00	13.14
ATOM	781	C	THR	102	3.329	8.218	45.331	1.00	12.67
ATOM	782	O	THR	102	4.122	7.609	46.053	1.00	13.26
ATOM	783	N	VAL	103	2.872	9.430	45.608	1.00	13.06
ATOM	784	CA	VAL	103	3.275	10.178	46.786	1.00	17.15
ATOM	785	CB	VAL	103	2.771	11.622	46.644	1.00	20.15
ATOM	786	CG1	VAL	103	2.563	12.250	47.990	1.00	26.49
ATOM	787	CG2	VAL	103	3.758	12.408	45.807	1.00	21.10
ATOM	788	C	VAL	103	2.769	9.533	48.084	1.00	16.61
ATOM	789	O	VAL	103	3.477	9.519	49.097	1.00	14.86
ATOM	790	N	MET	104	1.554	8.989	48.048	1.00	13.98
ATOM	791	CA	MET	104	0.976	8.336	49.219	1.00	13.90
ATOM	792	CB	MET	104	-0.514	8.053	48.997	1.00	16.23
ATOM	793	CG	MET	104	-1.373	9.288	48.838	1.00	20.48
ATOM	794	SD	MET	104	-1.516	10.232	50.350	1.00	23.82
ATOM	795	CE	MET	104	-2.587	9.130	51.315	1.00	23.65
ATOM	796	C	MET	104	1.701	7.031	49.537	1.00	13.22
ATOM	797	O	MET	104	1.979	6.735	50.707	1.00	13.56
ATOM	798	N	ARG	105	2.008	6.242	48.508	1.00	13.42

```
ATOM    799  CA   ARG   105      2.711    4.989   48.743   1.00 11.59
ATOM    800  CB   ARG   105      2.817    4.152   47.453   1.00 14.28
ATOM    801  CG   ARG   105      1.492    3.637   46.914   1.00 15.18
ATOM    802  CD   ARG   105      1.673    2.542   45.848   1.00 15.37
ATOM    803  NE   ARG   105      0.436    2.355   45.086   1.00 18.07
ATOM    804  CZ   ARG   105      0.151    2.986   43.951   1.00 16.17
ATOM    805  NH1  ARG   105      1.021    3.837   43.420   1.00 14.58
ATOM    806  NH2  ARG   105     -1.030    2.802   43.376   1.00 16.92
ATOM    807  C    ARG   105      4.112    5.296   49.275   1.00 10.65
ATOM    808  O    ARG   105      4.684    4.494   50.009   1.00 12.75
ATOM    809  N    ALA   106      4.645    6.463   48.916   1.00 12.09
ATOM    810  CA   ALA   106      5.978    6.873   49.346   1.00 13.06
ATOM    811  CB   ALA   106      6.496    7.999   48.455   1.00 14.76
ATOM    812  C    ALA   106      6.015    7.305   50.807   1.00 15.39
ATOM    813  O    ALA   106      7.094    7.529   51.365   1.00 15.17
ATOM    814  N    GLY   107      4.841    7.430   51.420   1.00 14.50
ATOM    815  CA   GLY   107      4.779    7.806   52.821   1.00 14.87
ATOM    816  C    GLY   107      3.904    8.991   53.207   1.00 15.59
ATOM    817  O    GLY   107      3.751    9.273   54.393   1.00 16.79
ATOM    818  N    ALA  .108      3.331    9.691   52.238   1.00 13.12
ATOM    819  CA   ALA   108      2.484   10.833   52.569   1.00 13.97
ATOM    820  CB   ALA   108      2.307   11.724   51.342   1.00 14.04
ATOM    821  C    ALA   108      1.122   10.374   53.099   1.00 14.46
ATOM    822  O    ALA   108      0.696    9.251   '52.834  1.00 14.12
ATOM    823  N    ASN   109      0.461   11.230   53.880   1.00 14.94
ATOM    824  CA   ASN   109     -0.863   10.919   54.440   1.00 14.90
ATOM    825  CB   ASN   109     -0.947   11.277   55.931   1.00 14.17
ATOM    826  CG   ASN   109      0.012   10.493   56.790   1.00 14.97
ATOM    827  OD1  ASN   109     -0.101    9.276   56.926   1.00 16.84
ATOM    828  ND2  ASN   109      0.959   11.193   57.388   1.00 14.33
ATOM    829  C    ASN   109     -1.901   11.781   53.737   1.00 13.58
ATOM    830  O    ASN   109     -3.102   11.556   53.870   1.00 15.82
ATOM    831  N    MET   110     -1.427   12.768   52.991   1.00 13.54
ATOM    832  CA   MET   110     -2.316   13.704   52.332   1.00 14.31
ATOM    833  CB   MET   110     -2.828   14.688   53.394   1.00 14.27
ATOM    834  CG   MET   110     -3.595   15.902   52.910   1.00 19.21
ATOM    835  SD   MET   110     -4.143   16.871   54.371   1.00 20.75
ATOM    836  CE   MET   110     -5.845   16.364   54.495   1.00 18.93
ATOM    837  C    MET   110     -1.576   14.431   51.219   1.00 13.50
ATOM    838  O    MET   110     -0.358   14.635   51.285   1.00 14.01
ATOM    839  N    VAL   111     -2.323   14.810   50.191   1.00 13.28
ATOM    840  CA   VAL   111     -1.765   15.507   49.050   1.00 15.44
ATOM    841  CB   VAL   111     -2.175   14.786   47.752   1.00 18.91
ATOM    842  CG1  VAL   111     -1.800   15.614   46.564   1.00 21.41
ATOM    843  CG2  VAL   111     -1.504   13.416   47.691   1.00 16.70
ATOM    844  C    VAL   111     -2.271   16.944   49.000   1.00 15.84
ATOM    845  O    VAL   111     -3.420   17.209   49.344   1.00 16.27
ATOM    846  N    LYS   112     -1.411   17.869   48.586   1.00 18.00
ATOM    847  CA   LYS   112     -1.810   19.266   48.475   1.00 17.62
ATOM    848  CB   LYS   112     -0.912   20.174   49.324   1.00 16.94
ATOM    849  CG   LYS   112     -1.299   21.650   49.203   1.00 18.28
ATOM    850  CD   LYS   112     -0.768   22.491   50.354   1.00 20.19
ATOM    851  CE   LYS   112      0.738   22.675   50.288   1.00 21.39
ATOM    852  NZ   LYS   112      1.171   23.485   49.116   1.00 22.77
ATOM    853  C    LYS   112     -1.738   19.707   47.022   1.00 18.52
ATOM    854  O    LYS   112     -0.741   19.461   46.330   1.00 18.26
ATOM    855  N    ILE   113     -2.800   20.360   46.563   1.00 18.70
ATOM    856  CA   ILE   113     -2.878   20.836   45.187   1.00 19.67
ATOM    857  CB   ILE   113     -3.852   19.967   44.359   1.00 20.73
ATOM    858  CG2  ILE   113     -3.270   18.573   44.169   1.00 20.69
ATOM    859  CG1  ILE   113     -5.201   19.870   45.067   1.00 21.18
ATOM    860  CD1  ILE   113     -6.238   19.041   44.316   1.00 22.35
ATOM    861  C    ILE   113     -3.349   22.288   45.139   1.00 20.68
ATOM    862  O    ILE   113     -4.206   22.694   45.919   1.00 23.09
ATOM    863  N    GLU   114     -2.775   23.055   44.217   1.00 20.92
ATOM    864  CA   GLU   114     -3.094   24.468   44.041   1.00 22.18
ATOM    865  CB   GLU   114     -1.872   25.219   43.510   1.00 23.81
ATOM    866  CG   GLU   114     -0.715   25.328   44.478   1.00 25.94
ATOM    867  CD   GLU   114      0.474   26.052   43.872   1.00 27.17
ATOM    868  OE1  GLU   114      0.296   26.741   42.844   1.00 28.77
ATOM    869  OE2  GLU   114      1.588   25.947   44.427   1.00 29.32
ATOM    870  C    GLU   114     -4.247   24.707   43.074   1.00 23.10
ATOM    871  O    GLU   114     -4.325   24.072   42.025   1.00 22.98
ATOM    872  N    GLY   115     -5.135   25.636   43.420   1.00 22.55
ATOM    873  CA   GLY   115     -6.246   25.933   42.534   1.00 24.88
ATOM    874  C    GLY   115     -7.581   26.079   43.230   1.00 24.82
ATOM    875  O    GLY   115     -7.720   25.743   44.406   1.00 26.26
```

```
ATOM    876   N    GLY   116      -8.569  26.582  42.496  1.00 25.06
ATOM    877   CA   GLY   116      -9.889  26.767  43.066  1.00 25.41
ATOM    878   C    GLY   116     -10.964  25.864  42.490  1.00 26.85
ATOM    879   O    GLY   116     -10.767  24.659  42.346  1.00 26.53
ATOM    880   N    GLU   117     -12.105  26.468  42.166  1.00 26.32
ATOM    881   CA   GLU   117     -13.268  25.782  41.606  1.00 27.23
ATOM    882   CB   GLU   117     -14.205  26.810  40.959  1.00 31.55
ATOM    883   CG   GLU   117     -15.191  27.444  41.923  1.00 36.76
ATOM    884   CD   GLU   117     -16.448  26.615  42.091  1.00 40.05
ATOM    885   OE1  GLU   117     -16.341  25.369  42.112  1.00 39.80
ATOM    886   OE2  GLU   117     -17.543  27.210  42.211  1.00 41.02
ATOM    887   C    GLU   117     -13.021  24.661  40.602  1.00 24.91
ATOM    888   O    GLU   117     -13.621  23.592  40.715  1.00 24.23
ATOM    889   N    TRP   118     -12.155  24.904  39.622  1.00 23.95
ATOM    890   CA   TRP   118     -11.880  23.906  38.588  1.00 23.05
ATOM    891   CB   TRP   118     -10.853  24.437  37.574  1.00 22.93
ATOM    892   CG   TRP   118      -9.417  24.433  38.027  1.00 22.06
ATOM    893   CD2  TRP   118      -8.430  23.432  37.736  1.00 22.29
ATOM    894   CE2  TRP   118      -7.227  23.836  38.356  1.00 21.75
ATOM    895   CE3  TRP   118      -8.449  22.231  37.015  1.00 21.59
ATOM    896   CD1  TRP   118      -8.787  25.377  38.790  1.00 22.77
ATOM    897   NE1  TRP   118      -7.472  25.027  38.989  1.00 23.97
ATOM    898   CZ2  TRP   118      -6.049  23.082  38.272  1.00 21.19
ATOM    899   CZ3  TRP   118      -7.273  21.478  36.932  1.00 19.76
ATOM    900   CH2  TRP   118      -6.093  21.908  37.558  1.00 18.03
ATOM    901   C    TRP   118     -11.415  22.562  39.137  1.00 22.73
ATOM    902   O    TRP   118     -11.504  21.542  38.453  1.00 22.61
ATOM    903   N    LEU   119     -10.933  22.563  40.375  1.00 22.53
ATOM    904   CA   LEU   119     -10.445  21.343  41.017  1.00 21.12
ATOM    905   CB   LEU   119      -9.323  21.686  42.000  1.00 22.00
ATOM    906   CG   LEU   119      -7.951  21.956  41.397  1.00 22.79
ATOM    907   CD1  LEU   119      -6.976  22.370  42.489  1.00 23.33
ATOM    908   CD2  LEU   119      -7.469  20.690  40.691  1.00 24.30
ATOM    909   C    LEU   119     -11.502  20.541  41.759  1.00 20.72
ATOM    910   O    LEU   119     -11.232  19.422  42.193  1.00 21.92
ATOM    911   N    VAL   120     -12.699  21.101  41.908  1.00 19.20
ATOM    912   CA   VAL   120     -13.766  20.419  42.638  1.00 19.95
ATOM    913   CB   VAL   120     -15.127  21.122  42.429  1.00 22.03
ATOM    914   CG1  VAL   120     -16.258  20.225  42.907  1.00 24.11
ATOM    915   CG2  VAL   120     -15.150  22.429  43.201  1.00 25.29
ATOM    916   C    VAL   120     -13.921  18.940  42.301  1.00 18.47
ATOM    917   O    VAL   120     -13.961  18.093  43.196  1.00 16.89
ATOM    918   N    GLU   121     -14.004  18.624  41.015  1.00 17.81
ATOM    919   CA   GLU   121     -14.163  17.237  40.611  1.00 17.82
ATOM    920   CB   GLU   121     -14.344  17.150  39.094  1.00 21.67
ATOM    921   CG   GLU   121     -14.418  15.728  38.576  1.00 25.89
ATOM    922   CD   GLU   121     -14.824  15.658  37.114  1.00 31.46
ATOM    923   OE1  GLU   121     -14.246  16.399  36.290  1.00 33.28
ATOM    924   OE2  GLU   121     -15.717  14.848  36.793  1.00 33.12
ATOM    925   C    GLU   121     -12.977  16.385  41.057  1.00 16.63
ATOM    926   O    GLU   121     -13.153  15.288  41.592  1.00 15.69
ATOM    927   N    THR   122     -11.772  16.901  40.846  1.00 16.55
ATOM    928   CA   THR   122     -10.557  16.188  41.230  1.00 15.50
ATOM    929   CB   THR   122      -9.291  17.010  40.858  1.00 16.20
ATOM    930   OG1  THR   122      -9.292  17.251  39.447  1.00 18.56
ATOM    931   CG2  THR   122      -8.009  16.250  41.215  1.00 15.78
ATOM    932   C    THR   122     -10.571  15.891  42.729  1.00 15.85
ATOM    933   O    THR   122     -10.300  14.769  43.145  1.00 14.26
ATOM    934   N    VAL   123     -10.905  16.890  43.539  1.00 16.07
ATOM    935   CA   VAL   123     -10.942  16.691  44.982  1.00 15.30
ATOM    936   CB   VAL   123     -11.265  17.993  45.722  1.00 16.32
ATOM    937   CG1  VAL   123     -11.382  17.733  47.217  1.00 15.84
ATOM    938   CG2  VAL   123     -10.194  19.023  45.431  1.00 17.06
ATOM    939   C    VAL   123     -11.964  15.649  45.392  1.00 16.79
ATOM    940   O    VAL   123     -11.685  14.793  46.237  1.00 13.71
ATOM    941   N    GLN   124     -13.155  15.728  44.803  1.00 15.90
ATOM    942   CA   GLN   124     -14.227  14.790  45.122  1.00 17.82
ATOM    943   CB   GLN   124     -15.498  15.146  44.333  1.00 19.74
ATOM    944   CG   GLN   124     -16.018  16.566  44.586  1.00 27.73
ATOM    945   CD   GLN   124     -17.335  16.871  43.871  1.00 30.08
ATOM    946   OE1  GLN   124     -17.414  16.825  42.641  1.00 33.03
ATOM    947   NE2  GLN   124     -18.370  17.190  44.643  1.00 28.31
ATOM    948   C    GLN   124     -13.820  13.350  44.815  1.00 18.29
ATOM    949   O    GLN   124     -14.045  12.439  45.621  1.00 17.54
ATOM    950   N    MET   125     -13.218  13.151  43.648  1.00 16.58
ATOM    951   CA   MET   125     -12.798  11.820  43.239  1.00 17.11
ATOM    952   CB   MET   125     -12.553  11.792  41.725  1.00 17.13
```

```
ATOM    953  CG   MET  125   -13.843  12.007  40.930  1.00  20.76
ATOM    954  SD   MET  125   -13.598  12.024  39.156  1.00  21.82
ATOM    955  CE   MET  125   -13.472  10.274  38.825  1.00  24.59
ATOM    956  C    MET  125   -11.578  11.317  44.011  1.00  15.45
ATOM    957  O    MET  125   -11.513  10.143  44.357  1.00  15.81
ATOM    958  N    LEU  126   -10.618  12.192  44.283  1.00  15.52
ATOM    959  CA   LEU  126    -9.458  11.776  45.047  1.00  16.42
ATOM    960  CB   LEU  126    -8.486  12.941  45.215  1.00  15.46
ATOM    961  CG   LEU  126    -7.491  13.096  44.056  1.00  16.54
ATOM    962  CD1  LEU  126    -6.769  14.429  44.166  1.00  17.29
ATOM    963  CD2  LEU  126    -6.498  11.933  44.087  1.00  16.74
ATOM    964  C    LEU  126    -9.914  11.264  46.416  1.00  17.65
ATOM    965  O    LEU  126    -9.459  10.217  46.882  1.00  15.07
ATOM    966  N    THR  127   -10.831  12.001  47.043  1.00  18.88
ATOM    967  CA   THR  127   -11.370  11.648  48.357  1.00  22.38
ATOM    968  CB   THR  127   -12.489  12.630  48.788  1.00  24.31
ATOM    969  OG1  THR  127   -11.971  13.967  48.825  1.00  30.18
ATOM    970  CG2  THR  127   -13.018  12.265  50.167  1.00  28.58
ATOM    971  C    THR  127   -11.950  10.235  48.406  1.00  21.91
ATOM    972  O    THR  127   -11.594   9.439  49.279  1.00  20.97
ATOM    973  N    GLU  128   -12.854   9.920  47.482  1.00  23.67
ATOM    974  CA   GLU  128   -13.455   8.589  47.473  1.00  22.51
ATOM    975  CB   GLU  128   -14.643   8.532  46.499  1.00  26.49
ATOM    976  CG   GLU  128   -14.656   9.613  45.450  1.00  27.76
ATOM    977  CD   GLU  128   -15.846   9.512  44.501  1.00  26.90
ATOM    978  OE1  GLU  128   -17.002   9.469  44.969  1.00  26.96
ATOM    979  OE2  GLU  128   -15.625   9.488  43.281  1.00  26.94
ATOM    980  C    GLU  128   -12.435   7.505  47.140  1.00  22.91
ATOM    981  O    GLU  128   -12.641   6.333  47.458  1.00  22.08
ATOM    982  N    ARG  129   -11.324   7.895  46.520  1.00  19.89
ATOM    983  CA   ARG  129   -10.291   6.929  46.176  1.00  19.15
ATOM    984  CB   ARG  129    -9.713   7.256  44.792  1.00  18.25
ATOM    985  CG   ARG  129   -10.712   6.934  43.664  1.00  18.33
ATOM    986  CD   ARG  129   -10.483   7.728  42.382  1.00  16.74
ATOM    987  NE   ARG  129   -11.514   7.426  41.386  1.00  14.27
ATOM    988  CZ   ARG  129   -12.793   7.779  41.491  1.00  16.92
ATOM    989  NH1  ARG  129   -13.220   8.459  42.547  1.00  14.64
ATOM    990  NH2  ARG  129   -13.654   7.440  40.544  1.00  15.04
ATOM    991  C    ARG  129    -9.202   6.856  47.260  1.00  19.41
ATOM    992  O    ARG  129    -8.045   6.521  46.987  1.00  18.30
ATOM    993  N    ALA  130    -9.616   7.174  48.488  1.00  19.07
ATOM    994  CA   ALA  130    -8.789   7.129  49.697  1.00  17.95
ATOM    995  CB   ALA  130    -8.201   5.722  49.868  1.00  16.84
ATOM    996  C    ALA  130    -7.674   8.164  49.860  1.00  18.35
ATOM    997  O    ALA  130    -6.821   8.015  50.738  1.00  17.72
ATOM    998  N    VAL  131    -7.684   9.211  49.043  1.00  18.16
ATOM    999  CA   VAL  131    -6.656  10.236  49.123  1.00  18.21
ATOM   1000  CB   VAL  131    -6.059  10.538  47.733  1.00  18.83
ATOM   1001  CG1  VAL  131    -4.972  11.599  47.856  1.00  19.02
ATOM   1002  CG2  VAL  131    -5.502   9.264  47.124  1.00  18.78
ATOM   1003  C    VAL  131    -7.162  11.550  49.704  1.00  17.21
ATOM   1004  O    VAL  131    -7.921  12.274  49.059  1.00  17.48
ATOM   1005  N    PRO  132    -6.768  11.858  50.947  1.00  17.96
ATOM   1006  CD   PRO  132    -6.078  10.981  51.909  1.00  16.97
ATOM   1007  CA   PRO  132    -7.195  13.109  51.580  1.00  16.82
ATOM   1008  CB   PRO  132    -6.775  12.929  53.043  1.00  17.66
ATOM   1009  CG   PRO  132    -5.667  11.944  52.979  1.00  22.79
ATOM   1010  C    PRO  132    -6.495  14.270  50.880  1.00  16.36
ATOM   1011  O    PRO  132    -5.335  14.159  50.465  1.00  14.89
ATOM   1012  N    VAL  133    -7.207  15.381  50.745  1.00  15.39
ATOM   1013  CA   VAL  133    -6.666  16.534  50.046  1.00  14.12
ATOM   1014  CB   VAL  133    -7.488  16.816  48.772  1.00  14.52
ATOM   1015  CG1  VAL  133    -6.921  18.016  48.037  1.00  12.24
ATOM   1016  CG2  VAL  133    -7.495  15.576  47.874  1.00  13.02
ATOM   1017  C    VAL  133    -6.621  17.821  50.855  1.00  14.73
ATOM   1018  O    VAL  133    -7.526  18.116  51.632  1.00  14.95
ATOM   1019  N    CYS  134    -5.546  18.571  50.650  1.00  15.49
ATOM   1020  CA   CYS  134    -5.355  19.868  51.273  1.00  14.56
ATOM   1021  CB   CYS  134    -4.001  19.946  51.985  1.00  14.83
ATOM   1022  SG   CYS  134    -3.649  21.586  52.681  1.00  17.18
ATOM   1023  C    CYS  134    -5.388  20.866  50.121  1.00  16.54
ATOM   1024  O    CYS  134    -4.642  20.734  49.143  1.00  16.64
ATOM   1025  N    GLY  135    -6.276  21.851  50.215  1.00  16.38
ATOM   1026  CA   GLY  135    -6.371  22.864  49.176  1.00  16.44
ATOM   1027  C    GLY  135    -5.297  23.919  49.363  1.00  18.40
ATOM   1028  O    GLY  135    -4.615  23.932  50.387  1.00  17.99
ATOM   1029  N    HIS  136    -5.150  24.806  48.382  1.00  18.50
```

```
ATOM   1030  CA  HIS   136    -4.147  25.868  48.435  1.00 18.97
ATOM   1031  C   HIS   136    -4.624  27.055  47.603  1.00 21.58
ATOM   1032  O   HIS   136    -4.727  26.965  46.380  1.00 21.19
ATOM   1033  CB  HIS   136    -2.810  25.332  47.899  1.00 19.18
ATOM   1034  CG  HIS   136    -1.638  26.240  48.126  1.00 19.85
ATOM   1035  ND1 HIS   136    -0.349  25.774  48.029  1.00 21.61
ATOM   1036  CE1 HIS   136     0.428  26.819  48.243  1.00 22.89
ATOM   1037  CD2 HIS   136    -1.614  27.568  48.403  1.00 19.60
ATOM   1038  NE2 HIS   136    -0.291  27.929  48.474  1.00 20.06
ATOM   1039  N   LEU   137    -4.925  28.162  48.278  1.00 23.56
ATOM   1040  CA  LEU   137    -5.399  29.374  47.617  1.00 24.34
ATOM   1041  CB  LEU   137    -6.850  29.655  48.019  1.00 25.33
ATOM   1042  CG  LEU   137    -7.884  28.574  47.685  1.00 24.22
ATOM   1043  CD1 LEU   137    -9.203  28.871  48.386  1.00 24.72
ATOM   1044  CD2 LEU   137    -8.072  28.510  46.181  1.00 24.79
ATOM   1045  C   LEU   137    -4.528  30.578  47.979  1.00 26.25
ATOM   1046  O   LEU   137    -3.798  30.552  48.969  1.00 25.52
ATOM   1047  N   GLY   138    -4.617  31.630  47.169  1.00 28.18
ATOM   1048  CA  GLY   138    -3.837  32.827  47.411  1.00 30.33
ATOM   1049  C   GLY   138    -2.702  32.926  46.414  1.00 32.93
ATOM   1050  O   GLY   138    -2.919  32.829  45.208  1.00 33.34
ATOM   1051  N   LEU   139    -1.489  33.109  46.916  1.00 34.19
ATOM   1052  CA  LEU   139    -0.320  33.212  46.058  1.00 36.17
ATOM   1053  CB  LEU   139     0.784  33.982  46.787  1.00 37.11
ATOM   1054  CG  LEU   139     1.968  34.522  45.977  1.00 39.03
ATOM   1055  CD1 LEU   139     2.838  35.383  46.884  1.00 40.33
ATOM   1056  CD2 LEU   139     2.780  33.385  45.383  1.00 37.65
ATOM   1057  C   LEU   139     0.157  31.803  45.698  1.00 37.33
ATOM   1058  O   LEU   139     0.914  31.184  46.442  1.00 37.46
ATOM   1059  N   THR   140    -0.304  31.303  44.555  1.00 37.52
ATOM   1060  CA  THR   140     0.064  29.974  44.081  1.00 38.56
ATOM   1061  CB  THR   140    -1.057  29.367  43.214  1.00 39.12
ATOM   1062  OG1 THR   140    -1.375  30.266  42.145  1.00 38.58
ATOM   1063  CG2 THR   140    -2.302  29.118  44.053  1.00 38.94
ATOM   1064  C   THR   140     1.343  30.044  43.249  1.00 38.97
ATOM   1065  O   THR   140     1.314  30.444  42.085  1.00 39.39
ATOM   1066  N   PRO   141     2.483  29.646  43.837  1.00 38.90
ATOM   1067  CD  PRO   141     2.619  29.077  45.190  1.00 39.41
ATOM   1068  CA  PRO   141     3.778  29.669  43.147  1.00 37.89
ATOM   1069  CB  PRO   141     4.742  29.115  44.197  1.00 38.82
ATOM   1070  CG  PRO   141     3.864  28.250  45.055  1.00 40.43
ATOM   1071  C   PRO   141     3.831  28.899  41.831  1.00 37.49
ATOM   1072  O   PRO   141     4.622  29.233  40.947  1.00 34.97
ATOM   1073  N   GLN   142     2.997  27.872  41.700  1.00 35.93
ATOM   1074  CA  GLN   142     2.975  27.084  40.470  1.00 37.63
ATOM   1075  CB  GLN   142     2.072  25.855  40.635  1.00 35.67
ATOM   1076  CG  GLN   142     2.807  24.600  41.091  1.00 34.13
ATOM   1077  CD  GLN   142     1.860  23.471  41.458  1.00 33.64
ATOM   1078  OE1 GLN   142     0.906  23.186  40.737  1.00 31.98
ATOM   1079  NE2 GLN   142     2.127  22.817  42.583  1.00 33.66
ATOM   1080  C   GLN   142     2.508  27.920  39.282  1.00 38.52
ATOM   1081  O   GLN   142     2.859  27.635  38.134  1.00 38.49
ATOM   1082  N   SER   143     1.718  28.953  39.562  1.00 39.73
ATOM   1083  CA  SER   143     1.210  29.834  38.513  1.00 40.92
ATOM   1084  CB  SER   143    -0.279  30.123  38.732  1.00 40.43
ATOM   1085  OG  SER   143    -1.059  28.946  38.606  1.00 41.04
ATOM   1086  C   SER   143     1.982  31.149  38.484  1.00 41.64
ATOM   1087  O   SER   143     1.448  32.178  38.076  1.00 42.46
ATOM   1088  N   VAL   144     3.238  31.110  38.916  1.00 42.62
ATOM   1089  CA  VAL   144     4.075  32.306  38.935  1.00 43.78
ATOM   1090  CB  VAL   144     5.483  31.995  39.492  1.00 43.30
ATOM   1091  CG1 VAL   144     6.194  31.001  38.588  1.00 43.74
ATOM   1092  CG2 VAL   144     6.291  33.278  39.616  1.00 44.06
ATOM   1093  C   VAL   144     4.219  32.918  37.541  1.00 44.58
ATOM   1094  O   VAL   144     4.423  34.123  37.405  1.00 44.39
ATOM   1095  N   ASN   145     4.111  32.082  36.512  1.00 45.34
ATOM   1096  CA  ASN   145     4.231  32.540  35.130  1.00 47.01
ATOM   1097  CB  ASN   145     4.606  31.368  34.214  1.00 47.34
ATOM   1098  CG  ASN   145     5.992  30.821  34.505  1.00 48.01
ATOM   1099  OD1 ASN   145     7.000  31.488  34.264  1.00 47.54
ATOM   1100  ND2 ASN   145     6.049  29.602  35.031  1.00 48.81
ATOM   1101  C   ASN   145     2.938  33.179  34.640  1.00 47.35
ATOM   1102  O   ASN   145     2.905  33.813  33.585  1.00 47.69
ATOM   1103  N   ILE   146     1.872  33.005  35.410  1.00 48.31
ATOM   1104  CA  ILE   146     0.578  33.569  35.055  1.00 49.69
ATOM   1105  CB  ILE   146    -0.574  32.693  35.589  1.00 49.13
ATOM   1106  CG2 ILE   146    -1.912  33.335  35.263  1.00 48.60
```

```
ATOM   1107  CG1  ILE   146      -0.485  31.290  34.981  1.00 48.60
ATOM   1108  CD1  ILE   146      -0.628  31.262  33.472  1.00 48.16
ATOM   1109  C    ILE   146       0.426  34.976  35.623  1.00 51.32
ATOM   1110  O    ILE   146      -0.045  35.880  34.934  1.00 51.26
ATOM   1111  N    PHE   147       0.831  35.154  36.879  1.00 52.78
ATOM   1112  CA   PHE   147       0.738  36.448  37.553  1.00 54.17
ATOM   1113  CB   PHE   147       0.713  36.254  39.072  1.00 55.12
ATOM   1114  CG   PHE   147      -0.198  35.152  39.528  1.00 56.36
ATOM   1115  CD1  PHE   147      -1.553  35.177  39.218  1.00 57.26
ATOM   1116  CD2  PHE   147       0.303  34.084  40.266  1.00 57.27
ATOM   1117  CE1  PHE   147      -2.400  34.151  39.634  1.00 57.90
ATOM   1118  CE2  PHE   147      -0.533  33.052  40.688  1.00 57.81
ATOM   1119  CZ   PHE   147      -1.887  33.086  40.371  1.00 58.12
ATOM   1120  C    PHE   147       1.914  37.350  37.188  1.00 54.46
ATOM   1121  O    PHE   147       1.937  38.528  37.544  1.00 54.14
ATOM   1122  N    GLY   148       2.890  36.787  36.483  1.00 55.28
ATOM   1123  CA   GLY   148       4.056  37.555  36.090  1.00 56.16
ATOM   1124  C    GLY   148       4.972  37.817  37.268  1.00 56.63
ATOM   1125  O    GLY   148       5.699  38.809  37.294  1.00 56.49
ATOM   1126  N    GLY   149       4.933  36.920  38.249  1.00 57.50
ATOM   1127  CA   GLY   149       5.761  37.068  39.431  1.00 58.67
ATOM   1128  C    GLY   149       4.997  36.690  40.685  1.00 59.94
ATOM   1129  O    GLY   149       3.828  36.305  40.613  1.00 59.46
ATOM   1130  N    TYR   150       5.653  36.797  41.837  1.00 61.00
ATOM   1131  CA   TYR   150       5.018  36.467  43.108  1.00 62.09
ATOM   1132  CB   TYR   150       6.029  35.830  44.068  1.00 62.64
ATOM   1133  CG   TYR   150       6.779  34.653  43.484  1.00 63.79
ATOM   1134  CD1  TYR   150       7.910  34.846  42.688  1.00 64.15
ATOM   1135  CE1  TYR   150       8.601  33.764  42.142  1.00 64.08
ATOM   1136  CD2  TYR   150       6.355  33.344  43.718  1.00 64.03
ATOM   1137  CE2  TYR   150       7.038  32.256  43.175  1.00 63.87
ATOM   1138  CZ   TYR   150       8.160  32.474  42.389  1.00 64.27
ATOM   1139  OH   TYR   150       8.840  31.407  41.849  1.00 64.43
ATOM   1140  C    TYR   150       4.426  37.721  43.744  1.00 62.40
ATOM   1141  O    TYR   150       5.141  38.523  44.347  1.00 62.18
ATOM   1142  N    LYS   151       3.113  37.883  43.603  1.00 62.64
ATOM   1143  CA   LYS   151       2.414  39.038  44.152  1.00 62.63
ATOM   1144  CB   LYS   151       1.768  39.842  43.020  1.00 63.52
ATOM   1145  CG   LYS   151       2.765  40.359  41.993  1.00 64.61
ATOM   1146  CD   LYS   151       2.085  41.186  40.916  1.00 65.48
ATOM   1147  CE   LYS   151       3.100  41.731  39.921  1.00 66.46
ATOM   1148  NZ   LYS   151       2.464  42.586  38.878  1.00 66.97
ATOM   1149  C    LYS   151       1.351  38.615  45.161  1.00 62.18
ATOM   1150  O    LYS   151       1.022  37.433  45.273  1.00 62.06
ATOM   1151  N    VAL   152       0.815  39.586  45.893  1.00 61.53
ATOM   1152  CA   VAL   152      -0.204  39.309  46.897  1.00 60.97
ATOM   1153  CB   VAL   152      -0.190  40.378  48.010  1.00 60.76
ATOM   1154  CG1  VAL   152      -1.225  40.039  49.073  1.00 60.74
ATOM   1155  CG2  VAL   152       1.195  40.468  48.624  1.00 60.69
ATOM   1156  C    VAL   152      -1.601  39.263  46.293  1.00 60.64
ATOM   1157  O    VAL   152      -1.999  40.166  45.559  1.00 60.43
ATOM   1158  N    GLN   153      -2.341  38.205  46.608  1.00 60.42
ATOM   1159  CA   GLN   153      -3.703  38.042  46.111  1.00 60.14
ATOM   1160  CB   GLN   153      -3.918  36.620  45.581  1.00 60.93
ATOM   1161  CG   GLN   153      -3.467  36.402  44.140  1.00 61.33
ATOM   1162  CD   GLN   153      -1.977  36.593  43.953  1.00 61.41
ATOM   1163  OE1  GLN   153      -1.169  35.901  44.572  1.00 62.43
ATOM   1164  NE2  GLN   153      -1.605  37.531  43.091  1.00 60.96
ATOM   1165  C    GLN   153      -4.715  38.333  47.214  1.00 59.42
ATOM   1166  O    GLN   153      -4.350  38.483  48.379  1.00 59.06
ATOM   1167  N    GLY   154      -5.988  38.410  46.838  1.00 58.76
ATOM   1168  CA   GLY   154      -7.030  38.685  47.808  1.00 58.28
ATOM   1169  C    GLY   154      -7.425  40.149  47.825  1.00 57.80
ATOM   1170  O    GLY   154      -8.548  40.489  48.199  1.00 56.85
ATOM   1171  N    ARG   155      -6.497  41.013  47.421  1.00 58.06
ATOM   1172  CA   ARG   155      -6.732  42.455  47.380  1.00 58.09
ATOM   1173  CB   ARG   155      -5.535  43.174  46.742  1.00 59.37
ATOM   1174  CG   ARG   155      -4.204  42.996  47.470  1.00 60.93
ATOM   1175  CD   ARG   155      -4.242  43.586  48.873  1.00 62.00
ATOM   1176  NE   ARG   155      -2.977  43.409  49.587  1.00 62.99
ATOM   1177  CZ   ARG   155      -1.826  43.969  49.227  1.00 63.25
ATOM   1178  NH1  ARG   155      -1.773  44.750  48.157  1.00 63.93
ATOM   1179  NH2  ARG   155      -0.727  43.753  49.938  1.00 63.47
ATOM   1180  C    ARG   155      -7.990  42.771  46.575  1.00 57.05
ATOM   1181  O    ARG   155      -8.123  42.355  45.425  1.00 57.28
ATOM   1182  N    GLY   156      -8.908  43.513  47.184  1.00 55.32
ATOM   1183  CA   GLY   156     -10.136  43.862  46.498  1.00 53.27
```

```
ATOM   1184  C    GLY   156    -11.306  43.028  46.976  1.00 52.09
ATOM   1185  O    GLY   156    -11.123  41.930  47.501  1.00 51.92
ATOM   1186  N    ASP   157    -12.511  43.553  46.790  1.00 50.40
ATOM   1187  CA   ASP   157    -13.731  42.872  47.208  1.00 49.29
ATOM   1188  CB   ASP   157    -14.914  43.832  47.090  1.00 50.74
ATOM   1189  CG   ASP   157    -14.693  45.121  47.854  1.00 51.46
ATOM   1190  OD1  ASP   157    -14.893  45.122  49.086  1.00 50.41
ATOM   1191  OD2  ASP   157    -14.304  46.126  47.216  1.00 53.02
ATOM   1192  C    ASP   157    -13.991  41.634  46.358  1.00 48.08
ATOM   1193  O    ASP   157    -14.231  40.544  46.881  1.00 46.48
ATOM   1194  N    GLU   158    -13.942  41.813  45.043  1.00 46.08
ATOM   1195  CA   GLU   158    -14.178  40.718  44.116  1.00 45.63
ATOM   1196  CB   GLU   158    -14.092  41.225  42.675  1.00 48.09
ATOM   1197  CG   GLU   158    -14.387  40.169  41.626  1.00 50.76
ATOM   1198  CD   GLU   158    -14.503  40.755  40.233  1.00 53.13
ATOM   1199  OE1  GLU   158    -15.430  41.564  40.002  1.00 55.10
ATOM   1200  OE2  GLU   158    -13.670  40.411  39.367  1.00 54.38
ATOM   1201  C    GLU   158    -13.187  39.578  44.329  1.00 43.56
ATOM   1202  O    GLU   158    -13.584  38.429  44.529  1.00 42.93
ATOM   1203  N    ALA   159    -11.898  39.899  44.287  1.00 41.57
ATOM   1204  CA   ALA   159    -10.859  38.893  44.482  1.00 39.78
ATOM   1205  CB   ALA   159     -9.482  39.547  44.444  1.00 39.93
ATOM   1206  C    ALA   159    -11.065  38.177  45.814  1.00 38.91
ATOM   1207  O    ALA   159    -10.917  36.958  45.904  1.00 37.78
ATOM   1208  N    GLY   160    -11.419  38.944  46.840  1.00 36.56
ATOM   1209  CA   GLY   160    -11.642  38.371  48.152  1.00 35.21
ATOM   1210  C    GLY   160    -12.818  37.416  48.194  1.00 35.10
ATOM   1211  O    GLY   160    -12.718  36.330  48.768  1.00 34.10
ATOM   1212  N    ASP   161    -13.935  37.813  47.591  1.00 33.83
ATOM   1213  CA   ASP   161    -15.126  36.971  47.575  1.00 33.55
ATOM   1214  CB   ASP   161    -16.335  37.747  47.038  1.00 34.86
ATOM   1215  CG   ASP   161    -16.651  38.986  47.861  1.00 35.97
ATOM   1216  OD1  ASP   161    -16.702  38.890  49.109  1.00 34.80
ATOM   1217  OD2  ASP   161    -16.862  40.056  47.255  1.00 37.49
ATOM   1218  C    ASP   161    -14.897  35.727  46.718  1.00 32.66
ATOM   1219  O    ASP   161    -15.553  34.704  46.910  1.00 30.79
ATOM   1220  N    GLN   162    -13.967  35.822  45.773  1.00 33.43
ATOM   1221  CA   GLN   162    -13.657  34.696  44.901  1.00 34.32
ATOM   1222  CB   GLN   162    -12.810  35.160  43.712  1.00 35.93
ATOM   1223  CG   GLN   162    -12.549  34.069  42.680  1.00 40.84
ATOM   1224  CD   GLN   162    -13.827  33.377  42.235  1.00 43.13
ATOM   1225  OE1  GLN   162    -14.770  34.023  41.774  1.00 45.74
ATOM   1226  NE2  GLN   162    -13.866  32.056  42.374  1.00 44.65
ATOM   1227  C    GLN   162    -12.915  33.613  45.683  1.00 32.85
ATOM   1228  O    GLN   162    -13.236  32.429  45.575  1.00 32.77
ATOM   1229  N    LEU   163    -11.928  34.022  46.474  1.00 31.71
ATOM   1230  CA   LEU   163    -11.159  33.074  47.275  1.00 31.82
ATOM   1231  CB   LEU   163    -10.025  33.792  48.017  1.00 33.87
ATOM   1232  CG   LEU   163     -8.879  34.358  47.173  1.00 35.14
ATOM   1233  CD1  LEU   163     -7.918  35.131  48.064  1.00 36.34
ATOM   1234  CD2  LEU   163     -8.146  33.222  46.472  1.00 36.72
ATOM   1235  C    LEU   163    -12.059  32.363  48.279  1.00 31.54
ATOM   1236  O    LEU   163    -11.968  31.150  48.456  1.00 30.72
ATOM   1237  N    LEU   164    -12.932  33.124  48.934  1.00 30.37
ATOM   1238  CA   LEU   164    -13.848  32.556  49.915  1.00 29.45
ATOM   1239  CB   LEU   164    -14.702  33.669  50.530  1.00 31.08
ATOM   1240  CG   LEU   164    -15.296  33.451  51.925  1.00 31.21
ATOM   1241  CD1  LEU   164    -16.045  34.715  52.346  1.00 35.31
ATOM   1242  CD2  LEU   164    -16.218  32.261  51.937  1.00 32.29
ATOM   1243  C    LEU   164    -14.737  31.540  49.203  1.00 28.86
ATOM   1244  O    LEU   164    -15.058  30.480  49.744  1.00 28.39
ATOM   1245  N    SER   165    -15.126  31.876  47.978  1.00 27.45
ATOM   1246  CA   SER   165    -15.973  31.004  47.173  1.00 28.46
ATOM   1247  CB   SER   165    -16.356  31.709  45.867  1.00 26.87
ATOM   1248  OG   SER   165    -17.280  30.932  45.133  1.00 31.92
ATOM   1249  C    SER   165    -15.243  29.699  46.856  1.00 26.43
ATOM   1250  O    SER   165    -15.796  28.611  47.010  1.00 27.06
ATOM   1251  N    ASP   166    -13.997  29.820  46.412  1.00 26.79
ATOM   1252  CA   ASP   166    -13.194  28.648  46.078  1.00 25.84
ATOM   1253  CB   ASP   166    -11.881  29.057  45.407  1.00 27.39
ATOM   1254  CG   ASP   166    -12.086  29.645  44.028  1.00 28.71
ATOM   1255  OD1  ASP   166    -12.913  29.099  43.262  1.00 31.41
ATOM   1256  OD2  ASP   166    -11.407  30.644  43.696  1.00 28.72
ATOM   1257  C    ASP   166    -12.886  27.840  47.331  1.00 25.65
ATOM   1258  O    ASP   166    -12.769  26.615  47.275  1.00 25.23
ATOM   1259  N    ALA   167    -12.750  28.534  48.459  1.00 23.48
ATOM   1260  CA   ALA   167    -12.454  27.893  49.733  1.00 22.78
```

```
ATOM   1261  CB   ALA   167   -12.184  28.956  50.806  1.00 23.00
ATOM   1262  C    ALA   167   -13.599  26.991  50.169  1.00 21.48
ATOM   1263  O    ALA   167   -13.387  25.833  50.532  1.00 19.60
ATOM   1264  N    LEU   168   -14.817  27.523  50.150  1.00 21.01
ATOM   1265  CA   LEU   168   -15.983  26.734  50.534  1.00 20.93
ATOM   1266  CB   LEU   168   -17.228  27.622  50.596  1.00 21.15
ATOM   1267  CG   LEU   168   -17.387  28.514  51.831  1.00 19.76
ATOM   1268  CD1  LEU   168   -18.297  29.693  51.501  1.00 21.84
ATOM   1269  CD2  LEU   168   -17.967  27.699  52.978  1.00 20.27
ATOM   1270  C    LEU   168   -16.199  25.630  49.509  1.00 20.35
ATOM   1271  O    LEU   168   -16.610  24.527  49.855  1.00 21.26
ATOM   1272  N    ALA   169   -15.925  25.943  48.248  1.00 21.84
ATOM   1273  CA   ALA   169   -16.088  24.984  47.161  1.00 22.58
ATOM   1274  CB   ALA   169   -15.774  25.648  45.829  1.00 19.71
ATOM   1275  C    ALA   169   -15.198  23.764  47.368  1.00 23.26
ATOM   1276  O    ALA   169   -15.638  22.626  47.192  1.00 23.84
ATOM   1277  N    LEU   170   -13.944  24.004  47.737  1.00 22.11
ATOM   1278  CA   LEU   170   -13.005  22.915  47.974  1.00 21.77
ATOM   1279  CB   LEU   170   -11.585  23.473  48.169  1.00 19.66
ATOM   1280  CG   LEU   170   -10.934  24.127  46.939  1.00 17.91
ATOM   1281  CD1  LEU   170    -9.666  24.896  47.340  1.00 19.18
ATOM   1282  CD2  LEU   170   -10.595  23.043  45.910  1.00 18.15
ATOM   1283  C    LEU   170   -13.447  22.114  49.198  1.00 20.95
ATOM   1284  O    LEU   170   -13.408  20.888  49.185  1.00 20.34
ATOM   1285  N    GLU   171   -13.883  22.803  50.253  1.00 21.68
ATOM   1286  CA   GLU   171   -14.332  22.116  51.461  1.00 21.25
ATOM   1287  CB   GLU   171   -14.746  23.129  52.536  1.00 22.53
ATOM   1288  CG   GLU   171   -15.385  22.502  53.775  1.00 25.91
ATOM   1289  CD   GLU   171   -15.745  23.536  54.834  1.00 27.19
ATOM   1290  OE1  GLU   171   -16.404  24.538  54.477  1.00 27.15
ATOM   1291  OE2  GLU   171   -15.377  23.342  56.016  1.00 27.26
ATOM   1292  C    GLU   171   -15.504  21.195  51.149  1.00 21.24
ATOM   1293  O    GLU   171   -15.538  20.044  51.592  1.00 21.38
ATOM   1294  N    ALA   172   -16.460  21.701  50.374  1.00 21.12
ATOM   1295  CA   ALA   172   -17.637  20.919  50.013  1.00 21.23
ATOM   1296  CB   ALA   172   -18.651  21.807  49.299  1.00 21.68
ATOM   1297  C    ALA   172   -17.272  19.724  49.134  1.00 20.21
ATOM   1298  O    ALA   172   -17.953  18.695  49.147  1.00 19.47
ATOM   1299  N    ALA   173   -16.192  19.866  48.374  1.00 22.48
ATOM   1300  CA   ALA   173   -15.725  18.801  47.491  1.00 19.03
ATOM   1301  CB   ALA   173   -14.767  19.379  46.444  1.00 20.74
ATOM   1302  C    ALA   173   -15.034  17.690  48.286  1.00 21.09
ATOM   1303  O    ALA   173   -14.845  16.575  47.792  1.00 20.88
ATOM   1304  N    GLY   174   -14.651  18.000  49.520  1.00 20.56
ATOM   1305  CA   GLY   174   -14.011  16.998  50.352  1.00 20.44
ATOM   1306  C    GLY   174   -12.664  17.365  50.949  1.00 19.70
ATOM   1307  O    GLY   174   -12.077  16.559  51.669  1.00 19.40
ATOM   1308  N    ALA   175   -12.157  18.559  50.658  1.00 20.44
ATOM   1309  CA   ALA   175   -10.871  18.964  51.218  1.00 19.55
ATOM   1310  CB   ALA   175   -10.464  20.316  50.677  1.00 20.28
ATOM   1311  C    ALA   175   -10.972  19.006  52.747  1.00 21.76
ATOM   1312  O    ALA   175   -11.891  19.610  53.297  1.00 20.48
ATOM   1313  N    GLN   176   -10.037  18.347  53.431  1.00 20.03
ATOM   1314  CA   GLN   176   -10.041  18.310  54.892  1.00 20.58
ATOM   1315  CB   GLN   176    -9.654  16.916  55.392  1.00 20.99
ATOM   1316  CG   GLN   176   -10.582  15.828  54.889  1.00 23.71
ATOM   1317  CD   GLN   176   -10.327  14.487  55.535  1.00 25.55
ATOM   1318  OE1  GLN   176   -10.614  14.291  56.713  1.00 29.79
ATOM   1319  NE2  GLN   176    -9.785  13.554  54.766  1.00 27.44
ATOM   1320  C    GLN   176    -9.096  19.349  55.487  1.00 20.58
ATOM   1321  O    GLN   176    -9.021  19.515  56.705  1.00 19.49
ATOM   1322  N    LEU   177    -8.376  20.037  54.610  1.00 20.99
ATOM   1323  CA   LEU   177    -7.440  21.074  55.001  1.00 21.65
ATOM   1324  CB   LEU   177    -6.063  20.478  55.315  1.00 22.64
ATOM   1325  CG   LEU   177    -5.821  20.041  56.763  1.00 25.50
ATOM   1326  CD1  LEU   177    -4.483  19.321  56.874  1.00 24.79
ATOM   1327  CD2  LEU   177    -5.838  21.272  57.670  1.00 24.33
ATOM   1328  C    LEU   177    -7.308  22.097  53.885  1.00 22.00
ATOM   1329  O    LEU   177    -7.529  21.792  52.709  1.00 20.39
ATOM   1330  N    LEU   178    -6.948  23.317  54.261  1.00 19.35
ATOM   1331  CA   LEU   178    -6.779  24.386  53.295  1.00 20.42
ATOM   1332  CB   LEU   178    -8.063  25.211  53.180  1.00 19.08
ATOM   1333  CG   LEU   178    -7.947  26.457  52.297  1.00 21.83
ATOM   1334  CD1  LEU   178    -7.793  26.056  50.832  1.00 22.51
ATOM   1335  CD2  LEU   178    -9.187  27.327  52.472  1.00 21.62
ATOM   1336  C    LEU   178    -5.630  25.304  53.681  1.00 21.17
ATOM   1337  O    LEU   178    -5.499  25.703  54.838  1.00 21.61
```

```
ATOM   1338  N    VAL   179    -4.803   25.630   52.696   1.00  20.87
ATOM   1339  CA   VAL   179    -3.672   26.518   52.893   1.00  21.64
ATOM   1340  CB   VAL   179    -2.360   25.910   52.320   1.00  21.83
ATOM   1341  CG1  VAL   179    -1.280   26.985   52.238   1.00  21.50
ATOM   1342  CG2  VAL   179    -1.876   24.760   53.204   1.00  16.70
ATOM   1343  C    VAL   179    -3.945   27.843   52.182   1.00  23.89
ATOM   1344  O    VAL   179    -4.370   27.865   51.020   1.00  22.84
ATOM   1345  N    LEU   180    -3.718   28.941   52.900   1.00  25.31
ATOM   1346  CA   LEU   180    -3.898   30.291   52.363   1.00  27.62
ATOM   1347  CB   LEU   180    -4.873   31.098   53.223   1.00  29.45
ATOM   1348  CG   LEU   180    -6.349   30.724   53.135   1.00  32.82
ATOM   1349  CD1  LEU   180    -7.138   31.542   54.147   1.00  31.62
ATOM   1350  CD2  LEU   180    -6.861   30.980   51.720   1.00  30.67
ATOM   1351  C    LEU   180    -2.537   30.962   52.398   1.00  27.37
ATOM   1352  O    LEU   180    -1.943   31.094   53.464   1.00  26.56
ATOM   1353  N    GLU   181    -2.052   31.383   51.235   1.00  28.04
ATOM   1354  CA   GLU   181    -0.743   32.017   51.131   1.00  30.09
ATOM   1355  CB   GLU   181     0.131   31.261   50.123   1.00  30.40
ATOM   1356  CG   GLU   181     1.579   31.735   50.082   1.00  33.41
ATOM   1357  CD   GLU   181     2.419   30.986   49.064   1.00  35.66
ATOM   1358  OE1  GLU   181     2.297   29.747   48.986   1.00  35.41
ATOM   1359  OE2  GLU   181     3.213   31.632   48.349   1.00  38.36
ATOM   1360  C    GLU   181    -0.821   33.477   50.709   1.00  30.13
ATOM   1361  O    GLU   181    -1.465   33.809   49.714   1.00  31.04
ATOM   1362  N    CYS   182    -0.154   34.337   51.474   1.00  30.42
ATOM   1363  CA   CYS   182    -0.097   35.764   51.195   1.00  31.63
ATOM   1364  CB   CYS   182     0.946   36.026   50.111   1.00  31.93
ATOM   1365  SG   CYS   182     2.594   35.443   50.588   1.00  36.42
ATOM   1366  C    CYS   182    -1.430   36.382   50.803   1.00  31.83
ATOM   1367  O    CYS   182    -1.683   36.677   49.632   1.00  30.94
ATOM   1368  N    VAL   183    -2.273   36.580   51.807   1.00  31.93
ATOM   1369  CA   VAL   183    -3.587   37.165   51.614   1.00  34.24
ATOM   1370  CB   VAL   183    -4.674   36.054   51.575   1.00  33.56
ATOM   1371  CG1  VAL   183    -4.945   35.517   52.974   1.00  34.62
ATOM   1372  CG2  VAL   183    -5.936   36.580   50.944   1.00  35.73
ATOM   1373  C    VAL   183    -3.846   38.118   52.786   1.00  35.32
ATOM   1374  O    VAL   183    -3.400   37.870   53.909   1.00  36.95
ATOM   1375  N    PRO   184    -4.556   39.232   52.538   1.00  35.89
ATOM   1376  CD   PRO   184    -5.239   39.654   51.302   1.00  35.39
ATOM   1377  CA   PRO   184    -4.827   40.170   53.631   1.00  34.72
ATOM   1378  CB   PRO   184    -5.751   41.203   52.980   1.00  35.50
ATOM   1379  CG   PRO   184    -6.394   40.449   51.849   1.00  36.10
ATOM   1380  C    PRO   184    -5.458   39.476   54.834   1.00  33.29
ATOM   1381  O    PRO   184    -6.384   38.679   54.688   1.00  33.08
ATOM   1382  N    VAL   185    -4.945   39.784   56.022   1.00  33.66
ATOM   1383  CA   VAL   185    -5.440   39.184   57.261   1.00  33.09
ATOM   1384  CB   VAL   185    -4.917   39.936   58.504   1.00  33.17
ATOM   1385  CG1  VAL   185    -5.309   39.182   59.763   1.00  33.65
ATOM   1386  CG2  VAL   185    -3.415   40.099   58.430   1.00  31.75
ATOM   1387  C    VAL   185    -6.960   39.165   57.338   1.00  33.78
ATOM   1388  O    VAL   185    -7.559   38.166   57.739   1.00  33.51
ATOM   1389  N    GLU   186    -7.577   40.282   56.968   1.00  35.07
ATOM   1390  CA   GLU   186    -9.030   40.407   56.991   1.00  36.33
ATOM   1391  CB   GLU   186    -9.445   41.766   56.417   1.00  37.40
ATOM   1392  CG   GLU   186    -8.658   42.181   55.181   1.00  42.15
ATOM   1393  CD   GLU   186    -7.468   43.080   55.508   1.00  44.18
ATOM   1394  OE1  GLU   186    -6.790   42.840   56.533   1.00  43.77
ATOM   1395  OE2  GLU   186    -7.205   44.022   54.726   1.00  45.83
ATOM   1396  C    GLU   186    -9.712   39.289   56.208   1.00  35.05
ATOM   1397  O    GLU   186   -10.704   38.714   56.659   1.00  35.07
ATOM   1398  N    LEU   187    -9.178   38.986   55.031   1.00  34.38
ATOM   1399  CA   LEU   187    -9.743   37.941   54.188   1.00  33.21
ATOM   1400  CB   LEU   187    -9.079   37.971   52.809   1.00  35.04
ATOM   1401  CG   LEU   187    -9.927   37.542   51.607   1.00  36.74
ATOM   1402  CD1  LEU   187    -9.075   37.607   50.351   1.00  37.59
ATOM   1403  CD2  LEU   187   -10.475   36.146   51.807   1.00  36.68
ATOM   1404  C    LEU   187    -9.533   36.577   54.836   1.00  32.03
ATOM   1405  O    LEU   187   -10.431   35.735   54.839   1.00  30.51
ATOM   1406  N    ALA   188    -8.340   36.364   55.386   1.00  31.07
ATOM   1407  CA   ALA   188    -8.012   35.102   56.039   1.00  31.01
ATOM   1408  CB   ALA   188    -6.576   35.138   56.554   1.00  30.06
ATOM   1409  C    ALA   188    -8.979   34.822   57.182   1.00  30.77
ATOM   1410  O    ALA   188    -9.345   33.673   57.424   1.00  30.09
ATOM   1411  N    LYS   189    -9.396   35.880   57.876   1.00  32.19
ATOM   1412  CA   LYS   189   -10.332   35.755   58.992   1.00  33.17
ATOM   1413  CB   LYS   189   -10.573   37.119   59.653   1.00  35.50
ATOM   1414  CG   LYS   189    -9.321   37.829   60.131   1.00  41.20
```

```
ATOM    1415  CD   LYS   189      -9.644  39.151  60.826  1.00  44.52
ATOM    1416  CE   LYS   189      -8.375  39.807  61.361  1.00  46.20
ATOM    1417  NZ   LYS   189      -8.623  41.120  62.025  1.00  49.12
ATOM    1418  C    LYS   189     -11.672  35.201  58.520  1.00  32.13
ATOM    1419  O    LYS   189     -12.226  34.284  59.130  1.00  32.62
ATOM    1420  N    ARG   190     -12.193  35.772  57.437  1.00  32.40
ATOM    1421  CA   ARG   190     -13.478  35.343  56.887  1.00  33.08
ATOM    1422  CB   ARG   190     -13.839  36.172  55.650  1.00  34.06
ATOM    1423  CG   ARG   190     -14.021  37.652  55.906  1.00  37.30
ATOM    1424  CD   ARG   190     -14.906  38.274  54.834  1.00  38.35
ATOM    1425  NE   ARG   190     -14.261  38.346  53.528  1.00  38.64
ATOM    1426  CZ   ARG   190     -14.920  38.343  52.373  1.00  38.37
ATOM    1427  NH1  ARG   190     -16.242  38.262  52.364  1.00  37.74
ATOM    1428  NH2  ARG   190     -14.265  38.435  51.223  1.00  38.25
ATOM    1429  C    ARG   190     -13.480  33.869  56.508  1.00  31.06
ATOM    1430  O    ARG   190     -14.363  33.115  56.913  1.00  31.92
ATOM    1431  N    ILE   191     -12.488  33.466  55.723  1.00  31.60
ATOM    1432  CA   ILE   191     -12.391  32.081  55.283  1.00  30.50
ATOM    1433  CB   ILE   191     -11.197  31.887  54.322  1.00  32.14
ATOM    1434  CG2  ILE   191     -11.045  30.412  53.965  1.00  32.40
ATOM    1435  CG1  ILE   191     -11.415  32.724  53.057  1.00  32.62
ATOM    1436  CD1  ILE   191     -10.227  32.763  52.116  1.00  33.46
ATOM    1437  C    ILE   191     -12.245  31.133  56.466  1.00  29.60
ATOM    1438  O    ILE   191     -12.885  30.084  56.509  1.00  29.78
ATOM    1439  N    THR   192     -11.410  31.509  57.428  1.00  28.46
ATOM    1440  CA   THR   192     -11.190  30.673  58.597  1.00  28.93
ATOM    1441  CB   THR   192     -10.100  31.269  59.514  1.00  28.24
ATOM    1442  OG1  THR   192      -8.870  31.379  58.788  1.00  28.74
ATOM    1443  CG2  THR   192      -9.878  30.380  60.723  1.00  27.20
ATOM    1444  C    THR   192     -12.472  30.478  59.402  1.00  29.99
ATOM    1445  O    THR   192     -12.747  29.378  59.885  1.00  28.00
ATOM    1446  N    GLU   193     -13.257  31.542  59.548  1.00  31.93
ATOM    1447  CA   GLU   193     -14.507  31.451  60.295  1.00  33.82
ATOM    1448  CB   GLU   193     -15.021  32.845  60.666  1.00  36.65
ATOM    1449  CG   GLU   193     -14.225  33.543  61.751  1.00  41.54
ATOM    1450  CD   GLU   193     -14.789  34.912  62.097  1.00  44.86
ATOM    1451  OE1  GLU   193     -14.740  35.816  61.233  1.00  45.51
ATOM    1452  OE2  GLU   193     -15.284  35.083  63.236  1.00  47.21
ATOM    1453  C    GLU   193     -15.567  30.725  59.480  1.00  32.10
ATOM    1454  O    GLU   193     -16.372  29.974  60.023  1.00  33.17
ATOM    1455  N    ALA   194     -15.554  30.947  58.172  1.00  31.90
ATOM    1456  CA   ALA   194     -16.523  30.327  57.278  1.00  30.74
ATOM    1457  CB   ALA   194     -16.446  30.980  55.910  1.00  30.76
ATOM    1458  C    ALA   194     -16.352  28.818  57.140  1.00  30.69
ATOM    1459  O    ALA   194     -17.338  28.083  57.051  1.00  30.09
ATOM    1460  N    LEU   195     -15.106  28.353  57.123  1.00  29.16
ATOM    1461  CA   LEU   195     -14.848  26.928  56.967  1.00  27.62
ATOM    1462  CB   LEU   195     -13.555  26.704  56.173  1.00  28.66
ATOM    1463  CG   LEU   195     -13.422  27.386  54.805  1.00  29.78
ATOM    1464  CD1  LEU   195     -12.296  26.713  54.020  1.00  28.71
ATOM    1465  CD2  LEU   195     -14.723  27.288  54.034  1.00  30.26
ATOM    1466  C    LEU   195     -14.774  26.156  58.279  1.00  26.86
ATOM    1467  O    LEU   195     -14.280  26.658  59.290  1.00  26.51
ATOM    1468  N    ALA   196     -15.289  24.931  58.247  1.00  24.22
ATOM    1469  CA   ALA   196     -15.282  24.046  59.403  1.00  24.93
ATOM    1470  CB   ALA   196     -16.392  23.011  59.275  1.00  25.42
ATOM    1471  C    ALA   196     -13.928  23.351  59.464  1.00  25.63
ATOM    1472  O    ALA   196     -13.461  22.973  60.537  1.00  24.87
ATOM    1473  N    ILE   197     -13.307  23.174  58.299  1.00  25.00
ATOM    1474  CA   ILE   197     -12.003  22.527  58.225  1.00  23.95
ATOM    1475  CB   ILE   197     -11.698  22.011  56.800  1.00  22.76
ATOM    1476  CG2  ILE   197     -12.670  20.901  56.426  1.00  21.58
ATOM    1477  CG1  ILE   197     -11.782  23.156  55.796  1.00  22.43
ATOM    1478  CD1  ILE   197     -11.166  22.818  54.447  1.00  24.79
ATOM    1479  C    ILE   197     -10.910  23.505  58.628  1.00  24.38
ATOM    1480  O    ILE   197     -11.011  24.709  58.381  1.00  24.17
ATOM    1481  N    PRO   198      -9.845  23.001  59.260  1.00  24.33
ATOM    1482  CD   PRO   198      -9.578  21.616  59.681  1.00  23.43
ATOM    1483  CA   PRO   198      -8.768  23.903  59.668  1.00  24.80
ATOM    1484  CB   PRO   198      -7.840  22.994  60.482  1.00  24.52
ATOM    1485  CG   PRO   198      -8.104  21.638  59.926  1.00  26.07
ATOM    1486  C    PRO   198      -8.070  24.579  58.489  1.00  23.71
ATOM    1487  O    PRO   198      -7.840  23.965  57.445  1.00  24.75
ATOM    1488  N    VAL   199      -7.765  25.859  58.659  1.00  22.66
ATOM    1489  CA   VAL   199      -7.090  26.628  57.633  1.00  21.26
ATOM    1490  CB   VAL   199      -7.840  27.952  57.343  1.00  21.86
ATOM    1491  CG1  VAL   199      -7.104  28.753  56.286  1.00  21.68
```

```
ATOM   1492  CG2 VAL   199     -9.261  27.651  56.881  1.00 23.56
ATOM   1493  C   VAL   199     -5.677  26.948  58.113  1.00 22.90
ATOM   1494  O   VAL   199     -5.489  27.514  59.191  1.00 21.18
ATOM   1495  N   ILE   200     -4.689  26.568  57.311  1.00 21.02
ATOM   1496  CA  ILE   200     -3.286  26.799  57.633  1.00 20.82
ATOM   1497  CB  ILE   200     -2.425  25.579  57.265  1.00 22.17
ATOM   1498  CG2 ILE   200     -0.956  25.857  57.584  1.00 21.54
ATOM   1499  CG1 ILE   200     -2.925  24.346  58.015  1.00 21.31
ATOM   1500  CD1 ILE   200     -2.202  23.066  57.627  1.00 26.13
ATOM   1501  C   ILE   200     -2.800  27.984  56.821  1.00 21.27
ATOM   1502  O   ILE   200     -2.820  27.952  55.590  1.00 19.70
ATOM   1503  N   GLY   201     -2.344  29.025  57.505  1.00 21.83
ATOM   1504  CA  GLY   201     -1.883  30.199  56.791  1.00 21.11
ATOM   1505  C   GLY   201     -0.382  30.376  56.722  1.00 21.20
ATOM   1506  O   GLY   201      0.360  29.915  57.586  1.00 20.91
ATOM   1507  N   ILE   202      0.053  31.035  55.656  1.00 20.88
ATOM   1508  CA  ILE   202      1.449  31.357  55.434  1.00 23.63
ATOM   1509  CB  ILE   202      2.135  30.374  54.442  1.00 25.53
ATOM   1510  CG2 ILE   202      1.199  30.026  53.295  1.00 25.11
ATOM   1511  CG1 ILE   202      3.431  30.991  53.922  1.00 26.37
ATOM   1512  CD1 ILE   202      4.537  31.025  54.938  1.00 25.90
ATOM   1513  C   ILE   202      1.401  32.754  54.827  1.00 23.67
ATOM   1514  O   ILE   202      1.098  32.921  53.647  1.00 24.24
ATOM   1515  N   GLY   203      1.672  33.760  55.649  1.00 24.85
ATOM   1516  CA  GLY   203      1.615  35.130  55.177  1.00 24.91
ATOM   1517  C   GLY   203      0.167  35.580  55.162  1.00 24.72
ATOM   1518  O   GLY   203     -0.222  36.447  54.378  1.00 26.70
ATOM   1519  N   ALA   204     -0.635  34.981  56.037  1.00 24.39
ATOM   1520  CA  ALA   204     -2.054  35.308  56.132  1.00 25.25
ATOM   1521  CB  ALA   204     -2.889  34.113  55.704  1.00 25.27
ATOM   1522  C   ALA   204     -2.467  35.745  57.538  1.00 25.30
ATOM   1523  O   ALA   204     -3.648  35.701  57.885  1.00 26.25
ATOM   1524  N   GLY   205     -1.495  36.155  58.346  1.00 26.07
ATOM   1525  CA  GLY   205     -1.798  36.597  59.699  1.00 25.17
ATOM   1526  C   GLY   205     -1.952  35.459  60.688  1.00 25.65
ATOM   1527  O   GLY   205     -1.853  34.294  60.316  1.00 24.90
ATOM   1528  N   ASN   206     -2.195  35.791  61.952  1.00 24.53
ATOM   1529  CA  ASN   206     -2.350  34.772  62.983  1.00 24.06
ATOM   1530  CB  ASN   206     -1.739  35.250  64.298  1.00 25.67
ATOM   1531  CG  ASN   206     -2.512  36.405  64.915  1.00 27.21
ATOM   1532  OD1 ASN   206     -2.316  36.744  66.081  1.00 27.76
ATOM   1533  ND2 ASN   206     -3.393  37.016  64.131  1.00 24.74
ATOM   1534  C   ASN   206     -3.805  34.407  63.230  1.00 22.53
ATOM   1535  O   ASN   206     -4.127  33.788  64.246  1.00 21.69
ATOM   1536  N   VAL   207     -4.680  34.786  62.305  1.00 21.94
ATOM   1537  CA  VAL   207     -6.098  34.496  62.446  1.00 23.84
ATOM   1538  CB  VAL   207     -6.953  35.513  61.668  1.00 26.20
ATOM   1539  CG1 VAL   207     -8.423  35.336  62.037  1.00 29.08
ATOM   1540  CG2 VAL   207     -6.488  36.925  61.981  1.00 27.68
ATOM   1541  C   VAL   207     -6.453  33.091  61.965  1.00 24.32
ATOM   1542  O   VAL   207     -7.563  32.600  62.203  1.00 23.30
ATOM   1543  N   THR   208     -5.513  32.431  61.297  1.00 23.32
ATOM   1544  CA  THR   208     -5.779  31.086  60.811  1.00 23.51
ATOM   1545  CB  THR   208     -4.840  30.708  59.643  1.00 23.12
ATOM   1546  OG1 THR   208     -3.481  30.977  60.008  1.00 21.10
ATOM   1547  CG2 THR   208     -5.198  31.502  58.402  1.00 23.13
ATOM   1548  C   THR   208     -5.663  30.053  61.919  1.00 24.29
ATOM   1549  O   THR   208     -5.129  30.331  62.995  1.00 24.25
ATOM   1550  N   ASP   209     -6.185  28.861  61.657  1.00 22.58
ATOM   1551  CA  ASP   209     -6.164  27.788  62.642  1.00 22.69
ATOM   1552  CB  ASP   209     -7.091  26.665  62.194  1.00 22.67
ATOM   1553  CG  ASP   209     -8.501  27.146  61.961  1.00 25.87
ATOM   1554  OD1 ASP   209     -9.130  27.621  62.931  1.00 23.71
ATOM   1555  OD2 ASP   209     -8.980  27.056  60.808  1.00 24.21
ATOM   1556  C   ASP   209     -4.764  27.244  62.830  1.00 21.49
ATOM   1557  O   ASP   209     -4.451  26.657  63.863  1.00 21.81
ATOM   1558  N   GLY   210     -3.928  27.444  61.819  1.00 21.84
ATOM   1559  CA  GLY   210     -2.569  26.956  61.891  1.00 20.56
ATOM   1560  C   GLY   210     -1.623  27.775  61.043  1.00 20.58
ATOM   1561  O   GLY   210     -2.049  28.651  60.287  1.00 21.05
ATOM   1562  N   GLN   211     -0.332  27.473  61.156  1.00 20.83
ATOM   1563  CA  GLN   211      0.699  28.192  60.424  1.00 21.52
ATOM   1564  CB  GLN   211      1.459  29.119  61.379  1.00 22.07
ATOM   1565  CG  GLN   211      0.626  30.239  61.993  1.00 19.78
ATOM   1566  CD  GLN   211      0.135  31.229  60.960  1.00 21.63
ATOM   1567  OE1 GLN   211      0.895  31.663  60.093  1.00 23.63
ATOM   1568  NE2 GLN   211     -1.139  31.608  61.055  1.00 21.71
```

```
ATOM   1569  C    GLN   211      1.701  27.250  59.761  1.00 21.50
ATOM   1570  O    GLN   211      1.886  26.117  60.199  1.00 20.81
ATOM   1571  N    ILE   212      2.344  27.724  58.700  1.00 22.48
ATOM   1572  CA   ILE   212      3.351  26.921  58.023  1.00 26.35
ATOM   1573  CB   ILE   212      2.755  26.171  56.799  1.00 28.17
ATOM   1574  CG2  ILE   212      2.484  27.139  55.660  1.00 29.37
ATOM   1575  CG1  ILE   212      3.725  25.075  56.344  1.00 29.11
ATOM   1576  CD1  ILE   212      3.081  24.015  55.457  1.00 31.12
ATOM   1577  C    ILE   212      4.494  27.829  57.588  1.00 28.11
ATOM   1578  O    ILE   212      4.287  29.011  57.319  1.00 29.09
ATOM   1579  N    LEU   213      5.706  27.287  57.556  1.00 29.45
ATOM   1580  CA   LEU   213      6.870  28.062  57.135  1.00 31.99
ATOM   1581  CB   LEU   213      7.432  28.880  58.300  1.00 33.40
ATOM   1582  CG   LEU   213      7.351  30.415  58.241  1.00 33.83
ATOM   1583  CD1  LEU   213      8.119  30.972  59.435  1.00 32.93
ATOM   1584  CD2  LEU   213      7.941  30.952  56.936  1.00 31.79
ATOM   1585  C    LEU   213      7.970  27.159  56.602  1.00 32.15
ATOM   1586  O    LEU   213      8.143  26.033  57.076  1.00 31.38
ATOM   1587  N    VAL   214      8.699  27.656  55.607  1.00 31.01
ATOM   1588  CA   VAL   214      9.808  26.913  55.025  1.00 30.31
ATOM   1589  CB   VAL   214     10.300  27.550  53.695  1.00 31.87
ATOM   1590  CG1  VAL   214     11.516  26.796  53.174  1.00 32.34
ATOM   1591  CG2  VAL   214      9.188  27.505  52.659  1.00 33.39
ATOM   1592  C    VAL   214     10.923  26.976  56.060  1.00 28.15
ATOM   1593  O    VAL   214     11.440  28.050  56.362  1.00 28.96
ATOM   1594  N    MET   215     11.268  25.820  56.614  1.00 25.80
ATOM   1595  CA   MET   215     12.299  25.727  57.632  1.00 24.04
ATOM   1596  CB   MET   215     12.617  24.254  57.927  1.00 21.67
ATOM   1597  CG   MET   215     13.046  23.449  56.708  1.00 21.44
ATOM   1598  SD   MET   215     14.311  22.218  57.084  1.00 19.28
ATOM   1599  CE   MET   215     15.756  23.248  56.942  1.00 20.16
ATOM   1600  C    MET   215     13.575  26.465  57.253  1.00 23.77
ATOM   1601  O    MET   215     14.253  27.025  58.114  1.00 24.19
ATOM   1602  N    HIS   216     13.901  26.489  55.966  1.00 23.61
ATOM   1603  CA   HIS   216     15.122  27.163  55.520  1.00 25.02
ATOM   1604  CB   HIS   216     15.342  26.890  54.035  1.00 25.17
ATOM   1605  CG   HIS   216     15.707  25.468  53.751  1.00 25.07
ATOM   1606  CD2  HIS   216     14.939  24.360  53.621  1.00 22.61
ATOM   1607  ND1  HIS   216     17.014  25.039  53.656  1.00 24.95
ATOM   1608  CE1  HIS   216     17.035  23.730  53.479  1.00 23.43
ATOM   1609  NE2  HIS   216     15.788  23.294  53.455  1.00 26.42
ATOM   1610  C    HIS   216     15.132  28.659  55.812  1.00 26.05
ATOM   1611  O    HIS   216     16.195  29.277  55.872  1.00 25.85
ATOM   1612  N    ASP   217     13.949  29.238  56.000  1.00 27.68
ATOM   1613  CA   ASP   217     13.848  30.661  56.321  1.00 31.25
ATOM   1614  CB   ASP   217     12.576  31.271  55.713  1.00 33.06
ATOM   1615  CG   ASP   217     12.653  31.406  54.200  1.00 35.27
ATOM   1616  OD1  ASP   217     13.623  32.016  53.700  1.00 36.27
ATOM   1617  OD2  ASP   217     11.735  30.916  53.507  1.00 37.69
ATOM   1618  C    ASP   217     13.827  30.825  57.845  1.00 31.02
ATOM   1619  O    ASP   217     14.353  31.803  58.394  1.00 32.35
ATOM   1620  N    ALA   218     13.225  29.853  58.524  1.00 30.86
ATOM   1621  CA   ALA   218     13.121  29.882  59.981  1.00 30.59
ATOM   1622  CB   ALA   218     12.208  28.761  60.451  1.00 30.22
ATOM   1623  C    ALA   218     14.471  29.783  60.689  1.00 31.33
ATOM   1624  O    ALA   218     14.593  30.180  61.851  1.00 31.23
ATOM   1625  N    PHE   219     15.482  29.267  59.992  1.00 30.28
ATOM   1626  CA   PHE   219     16.804  29.117  60.589  1.00 29.83
ATOM   1627  CB   PHE   219     17.202  27.640  60.598  1.00 29.92
ATOM   1628  CG   PHE   219     16.148  26.736  61.177  1.00 30.71
ATOM   1629  CD1  PHE   219     15.529  27.052  62.385  1.00 31.14
ATOM   1630  CD2  PHE   219     15.781  25.562  60.524  1.00 31.43
ATOM   1631  CE1  PHE   219     14.562  26.213  62.935  1.00 31.73
ATOM   1632  CE2  PHE   219     14.811  24.714  61.067  1.00 32.41
ATOM   1633  CZ   PHE   219     14.202  25.041  62.275  1.00 31.77
ATOM   1634  C    PHE   219     17.881  29.943  59.899  1.00 29.17
ATOM   1635  O    PHE   219     19.069  29.621  59.968  1.00 29.21
ATOM   1636  N    GLY   220     17.458  31.014  59.237  1.00 29.74
ATOM   1637  CA   GLY   220     18.390  31.889  58.550  1.00 29.75
ATOM   1638  C    GLY   220     19.357  31.185  57.621  1.00 30.84
ATOM   1639  O    GLY   220     20.507  31.601  57.485  1.00 30.29
ATOM   1640  N    ILE   221     18.900  30.120  56.973  1.00 30.94
ATOM   1641  CA   ILE   221     19.754  29.380  56.053  1.00 30.23
ATOM   1642  CB   ILE   221     19.270  27.930  55.896  1.00 28.54
ATOM   1643  CG2  ILE   221     20.167  27.187  54.908  1.00 26.85
ATOM   1644  CG1  ILE   221     19.288  27.239  57.263  1.00 27.41
ATOM   1645  CD1  ILE   221     18.654  25.879  57.279  1.00 26.63
```

```
ATOM   1646  C    ILE  221      19.759  30.060  54.691  1.00 31.63
ATOM   1647  O    ILE  221      20.799  30.178  54.041  1.00 30.47
ATOM   1648  N    THR  222      18.590  30.528  54.275  1.00 33.36
ATOM   1649  CA   THR  222      18.453  31.193  52.989  1.00 37.25
ATOM   1650  CB   THR  222      16.981  31.241  52.555  1.00 36.65
ATOM   1651  OG1  THR  222      16.249  32.088  53.448  1.00 39.18
ATOM   1652  CG2  THR  222      16.375  29.851  52.594  1.00 35.68
ATOM   1653  C    THR  222      18.995  32.616  53.029  1.00 39.66
ATOM   1654  O    THR  222      18.770  33.345  53.993  1.00 39.16
ATOM   1655  N    GLY  223      19.713  32.990  51.970  1.00 43.16
ATOM   1656  CA   GLY  223      20.292  34.320  51.848  1.00 47.53
ATOM   1657  C    GLY  223      20.326  35.168  53.105  1.00 50.12
ATOM   1658  O    GLY  223      20.927  34.786  54.110  1.00 51.54
ATOM   1659  N    GLY  224      19.680  36.327  53.052  1.00 51.89
ATOM   1660  CA   GLY  224      19.663  37.202  54.207  1.00 54.05
ATOM   1661  C    GLY  224      18.324  37.871  54.422  1.00 56.18
ATOM   1662  O    GLY  224      17.767  37.824  55.520  1.00 56.72
ATOM   1663  N    HIS  225      17.802  38.495  53.371  1.00 57.60
ATOM   1664  CA   HIS  225      16.520  39.185  53.453  1.00 58.83
ATOM   1665  CB   HIS  225      16.487  40.359  52.470  1.00 61.50
ATOM   1666  CG   HIS  225      17.419  41.475  52.828  1.00 63.93
ATOM   1667  CD2  HIS  225      18.446  42.036  52.146  1.00 65.25
ATOM   1668  ND1  HIS  225      17.338  42.155  54.025  1.00 65.20
ATOM   1669  CE1  HIS  225      18.275  43.087  54.063  1.00 65.92
ATOM   1670  NE2  HIS  225      18.960  43.036  52.935  1.00 66.01
ATOM   1671  C    HIS  225      15.340  38.257  53.183  1.00 57.89
ATOM   1672  O    HIS  225      14.797  38.234  52.079  1.00 58.08
ATOM   1673  N    ILE  226      14.947  37.497  54.201  1.00 56.71
ATOM   1674  CA   ILE  226      13.825  36.573  54.080  1.00 55.07
ATOM   1675  CB   ILE  226      13.651  35.740  55.367  1.00 55.20
ATOM   1676  CG2  ILE  226      14.888  34.885  55.601  1.00 54.98
ATOM   1677  CG1  ILE  226      13.400  36.668  56.558  1.00 54.81
ATOM   1678  CD1  ILE  226      13.109  35.942  57.852  1.00 54.53
ATOM   1679  C    ILE  226      12.541  37.359  53.820  1.00 53.36
ATOM   1680  O    ILE  226      12.499  38.576  54.020  1.00 54.02
ATOM   1681  N    PRO  227      11.473  36.674  53.377  1.00 50.99
ATOM   1682  CD   PRO  227      11.336  35.223  53.161  1.00 49.98
ATOM   1683  CA   PRO  227      10.206  37.361  53.104  1.00 48.87
ATOM   1684  CB   PRO  227       9.319  36.242  52.564  1.00 48.89
ATOM   1685  CG   PRO  227       9.847  35.031  53.259  1.00 49.85
ATOM   1686  C    PRO  227       9.615  38.045  54.336  1.00 46.39
ATOM   1687  O    PRO  227       9.860  37.626  55.465  1.00 46.32
ATOM   1688  N    LYS  228       8.839  39.101  54.108  1.00 44.27
ATOM   1689  CA   LYS  228       8.222  39.850  55.195  1.00 41.95
ATOM   1690  CB   LYS  228       7.360  40.992  54.648  1.00 43.42
ATOM   1691  CG   LYS  228       8.139  42.134  54.016  1.00 47.18
ATOM   1692  CD   LYS  228       8.750  41.736  52.678  1.00 49.90
ATOM   1693  CE   LYS  228       9.498  42.906  52.048  1.00 51.00
ATOM   1694  NZ   LYS  228      10.007  42.601  50.679  1.00 51.75
ATOM   1695  C    LYS  228       7.367  38.987  56.110  1.00 39.05
ATOM   1696  O    LYS  228       7.232  39.278  57.297  1.00 39.22
ATOM   1697  N    PHE  229       6.787  37.927  55.561  1.00 35.73
ATOM   1698  CA   PHE  229       5.935  37.052  56.352  1.00 31.21
ATOM   1699  CB   PHE  229       4.883  36.397  55.453  1.00 32.42
ATOM   1700  CG   PHE  229       5.460  35.543  54.360  1.00 32.78
ATOM   1701  CD1  PHE  229       5.908  34.253  54.625  1.00 32.94
ATOM   1702  CD2  PHE  229       5.554  36.030  53.060  1.00 34.15
ATOM   1703  CE1  PHE  229       6.442  33.457  53.606  1.00 32.72
ATOM   1704  CE2  PHE  229       6.086  35.246  52.034  1.00 33.39
ATOM   1705  CZ   PHE  229       6.529  33.958  52.309  1.00 33.05
ATOM   1706  C    PHE  229       6.707  35.985  57.116  1.00 28.23
ATOM   1707  O    PHE  229       6.126  35.262  57.921  1.00 28.17
ATOM   1708  N    ALA  230       8.013  35.900  56.876  1.00 26.34
ATOM   1709  CA   ALA  230       8.848  34.907  57.544  1.00 24.97
ATOM   1710  CB   ALA  230       9.833  34.304  56.552  1.00 26.85
ATOM   1711  C    ALA  230       9.605  35.484  58.734  1.00 26.01
ATOM   1712  O    ALA  230       9.743  36.700  58.865  1.00 25.21
ATOM   1713  N    LYS  231      10.090  34.596  59.600  1.00 24.27
ATOM   1714  CA   LYS  231      10.838  34.999  60.786  1.00 24.53
ATOM   1715  CB   LYS  231       9.898  35.149  61.989  1.00 25.49
ATOM   1716  CG   LYS  231      10.609  35.476  63.295  1.00 25.37
ATOM   1717  CD   LYS  231       9.634  35.596  64.455  1.00 28.18
ATOM   1718  CE   LYS  231      10.372  35.784  65.780  1.00 29.49
ATOM   1719  NZ   LYS  231       9.434  35.995  66.923  1.00 29.09
ATOM   1720  C    LYS  231      11.919  33.977  61.118  1.00 23.25
ATOM   1721  O    LYS  231      11.674  32.775  61.097  1.00 20.91
ATOM   1722  N    ASN  232      13.115  34.470  61.419  1.00 22.11
```

```
ATOM   1723  CA  ASN  232      14.238  33.617  61.775  1.00 22.68
ATOM   1724  CB  ASN  232      15.550  34.325  61.427  1.00 22.74
ATOM   1725  CG  ASN  232      16.770  33.476  61.711  1.00 22.28
ATOM   1726  OD1 ASN  232      16.710  32.519  62.477  1.00 22.05
ATOM   1727  ND2 ASN  232      17.897  33.839  61.103  1.00 21.01
ATOM   1728  C   ASN  232      14.157  33.363  63.283  1.00 22.41
ATOM   1729  O   ASN  232      14.442  34.256  64.083  1.00 22.40
ATOM   1730  N   PHE  233      13.754  32.158  63.670  1.00 20.06
ATOM   1731  CA  PHE  233      13.640  31.816  65.083  1.00 21.57
ATOM   1732  CB  PHE  233      12.623  30.692  65.284  1.00 20.88
ATOM   1733  CG  PHE  233      11.193  31.121  65.109  1.00 20.63
ATOM   1734  CD1 PHE  233      10.614  31.161  63.849  1.00 21.32
ATOM   1735  CD2 PHE  233      10.428  31.498  66.210  1.00 20.85
ATOM   1736  CE1 PHE  233       9.289  31.566  63.678  1.00 21.06
ATOM   1737  CE2 PHE  233       9.102  31.905  66.053  1.00 21.27
ATOM   1738  CZ  PHE  233       8.536  31.940  64.783  1.00 19.83
ATOM   1739  C   PHE  233      14.973  31.400  65.698  1.00 21.41
ATOM   1740  O   PHE  233      15.130  31.398  66.921  1.00 22.96
ATOM   1741  N   LEU  234      15.928  31.033  64.852  1.00 22.02
ATOM   1742  CA  LEU  234      17.242  30.622  65.328  1.00 24.52
ATOM   1743  CB  LEU  234      18.008  29.894  64.219  1.00 23.62
ATOM   1744  CG  LEU  234      19.465  29.538  64.524  1.00 22.78
ATOM   1745  CD1 LEU  234      19.527  28.580  65.701  1.00 21.54
ATOM   1746  CD2 LEU  234      20.112  28.923  63.292  1.00 25.26
ATOM   1747  C   LEU  234      18.045  31.838  65.773  1.00 26.95
ATOM   1748  O   LEU  234      18.727  31.801  66.796  1.00 25.49
ATOM   1749  N   ALA  235      17.958  32.911  64.996  1.00 30.52
ATOM   1750  CA  ALA  235      18.681  34.138  65.302  1.00 36.40
ATOM   1751  CB  ALA  235      18.274  35.239  64.331  1.00 37.16
ATOM   1752  C   ALA  235      18.417  34.578  66.736  1.00 40.32
ATOM   1753  O   ALA  235      19.337  34.973  67.454  1.00 40.96
ATOM   1754  N   GLU  236      17.154  34.501  67.145  1.00 43.98
ATOM   1755  CA  GLU  236      16.750  34.881  68.497  1.00 47.59
ATOM   1756  CB  GLU  236      15.280  34.514  68.730  1.00 48.96
ATOM   1757  CG  GLU  236      14.320  34.967  67.632  1.00 51.28
ATOM   1758  CD  GLU  236      14.177  36.477  67.544  1.00 52.90
ATOM   1759  OE1 GLU  236      15.174  37.159  67.224  1.00 53.61
ATOM   1760  OE2 GLU  236      13.063  36.984  67.798  1.00 53.70
ATOM   1761  C   GLU  236      17.625  34.138  69.502  1.00 48.66
ATOM   1762  O   GLU  236      18.234  34.748  70.380  1.00 49.42
ATOM   1763  N   THR  237      17.681  32.817  69.355  1.00 49.40
ATOM   1764  CA  THR  237      18.475  31.967  70.235  1.00 49.62
ATOM   1765  CB  THR  237      17.668  30.713  70.667  1.00 50.79
ATOM   1766  OG1 THR  237      18.464  29.900  71.542  1.00 52.05
ATOM   1767  CG2 THR  237      17.247  29.894  69.452  1.00 51.76
ATOM   1768  C   THR  237      19.772  31.529  69.548  1.00 48.44
ATOM   1769  O   THR  237      20.349  32.278  68.759  1.00 49.89
ATOM   1770  N   GLY  238      20.234  30.323  69.858  1.00 46.44
ATOM   1771  CA  GLY  238      21.451  29.819  69.248  1.00 42.67
ATOM   1772  C   GLY  238      21.379  28.318  69.059  1.00 41.05
ATOM   1773  O   GLY  238      22.385  27.663  68.790  1.00 41.30
ATOM   1774  N   ASP  239      20.174  27.776  69.194  1.00 37.96
ATOM   1775  CA  ASP  239      19.950  26.345  69.058  1.00 34.93
ATOM   1776  CB  ASP  239      19.748  25.735  70.449  1.00 38.61
ATOM   1777  CG  ASP  239      19.415  24.262  70.399  1.00 41.94
ATOM   1778  OD1 ASP  239      18.237  23.928  70.170  1.00 42.16
ATOM   1779  OD2 ASP  239      20.341  23.438  70.582  1.00 45.62
ATOM   1780  C   ASP  239      18.743  26.059  68.162  1.00 31.17
ATOM   1781  O   ASP  239      17.661  26.608  68.370  1.00 28.67
ATOM   1782  N   ILE  240      18.926  25.198  67.164  1.00 25.89
ATOM   1783  CA  ILE  240      17.834  24.882  66.252  1.00 22.33
ATOM   1784  CB  ILE  240      18.295  23.912  65.132  1.00 21.20
ATOM   1785  CG2 ILE  240      17.099  23.518  64.256  1.00 17.39
ATOM   1786  CG1 ILE  240      19.356  24.592  64.265  1.00 21.01
ATOM   1787  CD1 ILE  240      20.042  23.665  63.267  1.00 21.65
ATOM   1788  C   ILE  240      16.609  24.312  66.970  1.00 19.27
ATOM   1789  O   ILE  240      15.495  24.756  66.719  1.00 21.10
ATOM   1790  N   ARG  241      16.808  23.352  67.870  1.00 19.73
ATOM   1791  CA  ARG  241      15.687  22.761  68.592  1.00 19.91
ATOM   1792  CB  ARG  241      16.167  21.604  69.472  1.00 18.67
ATOM   1793  CG  ARG  241      16.544  20.366  68.659  1.00 19.80
ATOM   1794  CD  ARG  241      17.266  19.307  69.474  1.00 21.32
ATOM   1795  NE  ARG  241      17.484  18.087  68.692  1.00 22.98
ATOM   1796  CZ  ARG  241      18.334  17.979  67.675  1.00 24.19
ATOM   1797  NH1 ARG  241      19.068  19.018  67.302  1.00 25.28
ATOM   1798  NH2 ARG  241      18.444  16.830  67.018  1.00 24.38
ATOM   1799  C   ARG  241      14.964  23.806  69.427  1.00 20.32
```

ATOM	1800	O	ARG	241	13.727	23.803	69.520	1.00	19.66
ATOM	1801	N	ALA	242	15.730	24.707	70.034	1.00	19.52
ATOM	1802	CA	ALA	242	15.133	25.771	70.832	1.00	19.63
ATOM	1803	CB	ALA	242	16.227	26.580	71.524	1.00	20.26
ATOM	1804	C	ALA	242	14.312	26.662	69.896	1.00	19.55
ATOM	1805	O	ALA	242	13.233	27.133	70.267	1.00	21.30
ATOM	1806	N	ALA	243	14.804	26.874	68.676	1.00	18.14
ATOM	1807	CA	ALA	243	14.074	27.700	67.707	1.00	19.54
ATOM	1808	CB	ALA	243	14.928	27.944	66.457	1.00	18.09
ATOM	1809	C	ALA	243	12.748	27.031	67.326	1.00	19.51
ATOM	1810	O	ALA	243	11.731	27.701	67.180	1.00	20.19
ATOM	1811	N	VAL	244	12.769	25.710	67.157	1.00	21.10
ATOM	1812	CA	VAL	244	11.554	24.969	66.818	1.00	19.17
ATOM	1813	CB	VAL	244	11.842	23.457	66.632	1.00	18.81
ATOM	1814	CG1	VAL	244	10.536	22.668	66.538	1.00	18.20
ATOM	1815	CG2	VAL	244	12.671	23.245	65.361	1.00	17.47
ATOM	1816	C	VAL	244	10.521	25.146	67.927	1.00	20.06
ATOM	1817	O	VAL	244	9.336	25.348	67.660	1.00	19.30
ATOM	1818	N	ARG	245	10.972	25.073	69.174	1.00	21.06
ATOM	1819	CA	ARG	245	10.063	25.227	70.297	1.00	21.32
ATOM	1820	CB	ARG	245	10.780	24.907	71.615	1.00	21.31
ATOM	1821	CG	ARG	245	11.128	23.427	71.766	1.00	22.58
ATOM	1822	CD	ARG	245	11.472	23.053	73.209	1.00	25.04
ATOM	1823	NE	ARG	245	12.697	23.674	73.698	1.00	26.83
ATOM	1824	CZ	ARG	245	13.930	23.291	73.375	1.00	29.75
ATOM	1825	NH1	ARG	245	14.126	22.274	72.547	1.00	30.29
ATOM	1826	NH2	ARG	245	14.980	23.921	73.896	1.00	29.20
ATOM	1827	C	ARG	245	9.435	26.619	70.352	1.00	21.20
ATOM	1828	O	ARG	245	8.236	26.749	70.605	1.00	21.04
ATOM	1829	N	GLN	246	10.231	27.653	70.095	1.00	22.00
ATOM	1830	CA	GLN	246	9.730	29.024	70.122	1.00	23.64
ATOM	1831	CB	GLN	246	10.877	30.012	69.919	1.00	26.15
ATOM	1832	CG	GLN	246	10.464	31.464	70.076	1.00	29.62
ATOM	1833	CD	GLN	246	11.652	32.399	70.056	1.00	33.46
ATOM	1834	OE1	GLN	246	12.600	32.222	70.822	1.00	35.90
ATOM	1835	NE2	GLN	246	11.609	33.404	69.185	1.00	34.94
ATOM	1836	C	GLN	246	8.683	29.220	69.036	1.00	24.20
ATOM	1837	O	GLN	246	7.664	29.880	69.245	1.00	23.85
ATOM	1838	N	TYR	247	8.942	28.651	67.864	1.00	21.90
ATOM	1839	CA	TYR	247	7.999	28.751	66.761	1.00	21.66
ATOM	1840	CB	TYR	247	8.571	28.037	65.528	1.00	19.75
ATOM	1841	CG	TYR	247	7.579	27.795	64.419	1.00	20.83
ATOM	1842	CD1	TYR	247	6.815	28.837	63.899	1.00	19.45
ATOM	1843	CE1	TYR	247	5.892	28.612	62.885	1.00	21.16
ATOM	1844	CD2	TYR	247	7.398	26.517	63.891	1.00	21.25
ATOM	1845	CE2	TYR	247	6.480	26.281	62.876	1.00	21.03
ATOM	1846	CZ	TYR	247	5.729	27.327	62.378	1.00	20.70
ATOM	1847	OH	TYR	247	4.802	27.085	61.388	1.00	20.47
ATOM	1848	C	TYR	247	6.673	28.125	67.199	1.00	21.28
ATOM	1849	O	TYR	247	5.609	28.723	67.026	1.00	21.42
ATOM	1850	N	MET	248	6.746	26.929	67.782	1.00	20.26
ATOM	1851	CA	MET	248	5.556	26.219	68.258	1.00	21.53
ATOM	1852	CB	MET	248	5.951	24.872	68.884	1.00	21.82
ATOM	1853	CG	MET	248	6.426	23.815	67.882	1.00	21.90
ATOM	1854	SD	MET	248	7.248	22.415	68.688	1.00	26.67
ATOM	1855	CE	MET	248	5.858	21.537	69.370	1.00	24.87
ATOM	1856	C	MET	248	4.786	27.040	69.293	1.00	22.86
ATOM	1857	O	MET	248	3.554	27.155	69.231	1.00	21.83
ATOM	1858	N	ALA	249	5.518	27.606	70.247	1.00	21.40
ATOM	1859	CA	ALA	249	4.898	28.405	71.299	1.00	21.90
ATOM	1860	CB	ALA	249	5.926	28.738	72.369	1.00	21.23
ATOM	1861	C	ALA	249	4.252	29.687	70.778	1.00	21.43
ATOM	1862	O	ALA	249	3.099	29.979	71.105	1.00	22.72
ATOM	1863	N	GLU	250	4.989	30.448	69.970	1.00	22.09
ATOM	1864	CA	GLU	250	4.469	31.707	69.433	1.00	23.27
ATOM	1865	CB	GLU	250	5.549	32.454	68.649	1.00	22.04
ATOM	1866	CG	GLU	250	6.815	32.693	69.442	1.00	24.15
ATOM	1867	CD	GLU	250	7.629	33.860	68.923	1.00	24.35
ATOM	1868	OE1	GLU	250	7.549	34.169	67.719	1.00	25.60
ATOM	1869	OE2	GLU	250	8.362	34.464	69.729	1.00	25.39
ATOM	1870	C	GLU	250	3.231	31.538	68.558	1.00	25.21
ATOM	1871	O	GLU	250	2.406	32.454	68.449	1.00	24.11
ATOM	1872	N	VAL	251	3.093	30.376	67.930	1.00	24.87
ATOM	1873	CA	VAL	251	1.927	30.135	67.094	1.00	24.81
ATOM	1874	CB	VAL	251	2.114	28.886	66.198	1.00	23.31
ATOM	1875	CG1	VAL	251	0.827	28.605	65.431	1.00	22.66
ATOM	1876	CG2	VAL	251	3.260	29.108	65.234	1.00	23.33

```
ATOM   1877  C    VAL   251      0.693  29.927  67.970  1.00 25.72
ATOM   1878  O    VAL   251     -0.355  30.524  67.731  1.00 26.34
ATOM   1879  N    GLU   252      0.825  29.085  68.990  1.00 25.88
ATOM   1880  CA   GLU   252     -0.291  28.804  69.885  1.00 28.97
ATOM   1881  CB   GLU   252      0.066  27.667  70.842  1.00 31.63
ATOM   1882  CG   GLU   252     -1.076  27.268  71.762  1.00 35.49
ATOM   1883  CD   GLU   252     -0.739  26.078  72.633  1.00 38.81
ATOM   1884  OE1  GLU   252     -1.557  25.730  73.513  1.00 41.32
ATOM   1885  OE2  GLU   252      0.343  25.486  72.438  1.00 40.57
ATOM   1886  C    GLU   252     -0.713  30.026  70.686  1.00 29.30
ATOM   1887  O    GLU   252     -1.872  30.142  71.082  1.00 28.02
ATOM   1888  N    SER   253      0.233  30.930  70.922  1.00 30.46
ATOM   1889  CA   SER   253     -0.038  32.148  71.681  1.00 32.50
ATOM   1890  CB   SER   253      1.209  32.572  72.450  1.00 32.17
ATOM   1891  OG   SER   253      1.459  31.671  73.519  1.00 39.52
ATOM   1892  C    SER   253     -0.497  33.302  70.794  1.00 31.92
ATOM   1893  O    SER   253     -1.051  34.288  71.283  1.00 32.17
ATOM   1894  N    GLY   254     -0.264  33.178  69.492  1.00 30.27
ATOM   1895  CA   GLY   254     -0.665  34.227  68.571  1.00 27.52
ATOM   1896  C    GLY   254      0.429  35.249  68.330  1.00 26.04
ATOM   1897  O    GLY   254      0.259  36.178  67.541  1.00 28.43
ATOM   1898  N    VAL   255      1.556  35.083  69.013  1.00 25.10
ATOM   1899  CA   VAL   255      2.678  35.998  68.861  1.00 24.43
ATOM   1900  CB   VAL   255      3.806  35.637  69.836  1.00 24.55
ATOM   1901  CG1  VAL   255      5.016  36.530  69.601  1.00 25.47
ATOM   1902  CG2  VAL   255      3.299  35.782  71.264  1.00 27.69
ATOM   1903  C    VAL   255      3.209  35.966  67.433  1.00 23.67
ATOM   1904  O    VAL   255      3.667  36.981  66.901  1.00 21.95
ATOM   1905  N    TYR   256      3.155  34.786  66.821  1.00 24.22
ATOM   1906  CA   TYR   256      3.597  34.614  65.441  1.00 22.81
ATOM   1907  CB   TYR   256      4.856  33.739  65.356  1.00 22.52
ATOM   1908  CG   TYR   256      5.361  33.602  63.935  1.00 22.38
ATOM   1909  CD1  TYR   256      6.061  34.644  63.320  1.00 22.41
ATOM   1910  CE1  TYR   256      6.436  34.574  61.975  1.00 23.46
ATOM   1911  CD2  TYR   256      5.053  32.473  63.171  1.00 23.14
ATOM   1912  CE2  TYR   256      5.419  32.388  61.825  1.00 22.31
ATOM   1913  CZ   TYR   256      6.108  33.443  61.234  1.00 25.45
ATOM   1914  OH   TYR   256      6.448  33.378  59.894  1.00 23.06
ATOM   1915  C    TYR   256      2.476  33.950  64.645  1.00 22.89
ATOM   1916  O    TYR   256      1.860  32.995  65.107  1.00 20.80
ATOM   1917  N    PRO   257      2.188  34.465  63.441  1.00 23.79
ATOM   1918  CD   PRO   257      1.258  33.861  62.468  1.00 25.59
ATOM   1919  CA   PRO   257      2.886  35.611  62.854  1.00 25.56
ATOM   1920  CB   PRO   257      2.485  35.542  61.379  1.00 26.50
ATOM   1921  CG   PRO   257      1.128  34.947  61.427  1.00 26.66
ATOM   1922  C    PRO   257      2.489  36.934  63.513  1.00 26.91
ATOM   1923  O    PRO   257      1.382  37.074  64.027  1.00 26.07
ATOM   1924  N    GLY   258      3.412  37.889  63.501  1.00 28.06
ATOM   1925  CA   GLY   258      3.141  39.182  64.092  1.00 31.45
ATOM   1926  C    GLY   258      2.550  40.108  63.052  1.00 33.08
ATOM   1927  O    GLY   258      2.454  39.750  61.875  1.00 31.82
ATOM   1928  N    GLU   259      2.153  41.301  63.476  1.00 33.88
ATOM   1929  CA   GLU   259      1.571  42.259  62.554  1.00 35.72
ATOM   1930  CB   GLU   259      1.118  43.513  63.304  1.00 37.56
ATOM   1931  CG   GLU   259      0.153  44.376  62.519  1.00 40.03
ATOM   1932  CD   GLU   259     -1.186  43.695  62.296  1.00 42.11
ATOM   1933  OE1  GLU   259     -2.009  44.237  61.534  1.00 45.27
ATOM   1934  OE2  GLU   259     -1.421  42.620  62.886  1.00 44.73
ATOM   1935  C    GLU   259      2.606  42.629  61.498  1.00 36.27
ATOM   1936  O    GLU   259      2.258  43.046  60.391  1.00 38.03
ATOM   1937  N    GLU   260      3.881  42.468  61.844  1.00 36.02
ATOM   1938  CA   GLU   260      4.976  42.780  60.930  1.00 36.42
ATOM   1939  CB   GLU   260      6.318  42.804  61.673  1.00 39.45
ATOM   1940  CG   GLU   260      6.264  43.354  63.087  1.00 43.52
ATOM   1941  CD   GLU   260      5.723  42.347  64.088  1.00 46.00
ATOM   1942  OE1  GLU   260      6.384  41.306  64.306  1.00 47.00
ATOM   1943  OE2  GLU   260      4.637  42.596  64.656  1.00 46.44
ATOM   1944  C    GLU   260      5.057  41.724  59.836  1.00 35.35
ATOM   1945  O    GLU   260      5.677  41.940  58.797  1.00 34.80
ATOM   1946  N    HIS   261      4.434  40.577  60.084  1.00 34.70
ATOM   1947  CA   HIS   261      4.448  39.471  59.132  1.00 34.15
ATOM   1948  CB   HIS   261      4.760  38.164  59.857  1.00 32.10
ATOM   1949  CG   HIS   261      6.004  38.213  60.687  1.00 31.51
ATOM   1950  CD2  HIS   261      6.200  38.019  62.013  1.00 29.70
ATOM   1951  ND1  HIS   261      7.249  38.460  60.149  1.00 30.98
ATOM   1952  CE1  HIS   261      8.158  38.411  61.106  1.00 28.80
ATOM   1953  NE2  HIS   261      7.548  38.145  62.246  1.00 28.77
```

ATOM	1954	C	HIS	261	3.110	39.330	58.424	1.00	35.41
ATOM	1955	O	HIS	261	2.912	38.408	57.631	1.00	35.55
ATOM	1956	N	SER	262	2.195	40.248	58.716	1.00	35.97
ATOM	1957	CA	SER	262	0.864	40.226	58.133	1.00	36.99
ATOM	1958	CB	SER	262	-0.173	40.483	59.227	1.00	35.31
ATOM	1959	OG	SER	262	-0.052	39.540	60.279	1.00	37.80
ATOM	1960	C	SER	262	0.703	41.254	57.014	1.00	38.31
ATOM	1961	O	SER	262	1.483	42.203	56.909	1.00	37.66
ATOM	1962	N	PHE	263	-0.312	41.050	56.178	1.00	40.01
ATOM	1963	CA	PHE	263	-0.600	41.955	55.066	1.00	41.82
ATOM	1964	CB	PHE	263	-0.434	41.243	53.718	1.00	42.58
ATOM	1965	CG	PHE	263	0.969	40.797	53.429	1.00	43.74
ATOM	1966	CD1	PHE	263	1.306	39.447	53.467	1.00	43.83
ATOM	1967	CD2	PHE	263	1.954	41.727	53.110	1.00	44.25
ATOM	1968	CE1	PHE	263	2.605	39.029	53.190	1.00	44.88
ATOM	1969	CE2	PHE	263	3.254	41.322	52.832	1.00	45.05
ATOM	1970	CZ	PHE	263	3.583	39.970	52.871	1.00	45.70
ATOM	1971	C	PHE	263	-2.026	42.482	55.169	1.00	42.76
ATOM	1972	O	PHE	263	-2.827	41.984	55.961	1.00	41.84
ATOM	1973	N	HIS	264	-2.333	43.491	54.359	1.00	44.75
ATOM	1974	CA	HIS	264	-3.661	44.102	54.336	1.00	47.39
ATOM	1975	CB	HIS	264	-3.719	45.285	55.303	1.00	48.50
ATOM	1976	CG	HIS	264	-3.536	44.897	56.735	1.00	49.55
ATOM	1977	CD2	HIS	264	-2.580	45.229	57.635	1.00	49.70
ATOM	1978	ND1	HIS	264	-4.394	44.037	57.386	1.00	49.75
ATOM	1979	CE1	HIS	264	-3.973	43.854	58.625	1.00	50.24
ATOM	1980	NE2	HIS	264	-2.874	44.565	58.801	1.00	49.74
ATOM	1981	C	HIS	264	-4.020	44.576	52.931	1.00	47.60
ATOM	1982	O	HIS	264	-5.144	44.275	52.483	1.00	48.91
ATOM	1983	OXT	HIS	264	-3.178	45.249	52.302	1.00	48.36
ATOM	1984	C1	KPL	265	5.087	27.716	51.358	1.00	41.50
ATOM	1985	C2	KPL	265	4.190	26.479	51.578	1.00	40.60
ATOM	1986	C3	KPL	265	4.654	25.755	52.846	1.00	39.94
ATOM	1987	C4	KPL	265	2.727	26.938	51.779	1.00	41.78
ATOM	1988	O1	KPL	265	2.243	27.630	50.619	1.00	43.47
ATOM	1989	C5	KPL	265	4.309	25.525	50.360	1.00	40.08
ATOM	1990	O2	KPL	265	3.322	25.239	49.713	1.00	38.16
ATOM	1991	C6	KPL	265	5.636	24.923	49.944	1.00	39.07
ATOM	1992	O3	KPL	265	6.653	25.170	50.562	1.00	40.08
ATOM	1993	O4	KPL	265	5.695	24.104	48.874	1.00	38.37
ATOM	1994	CB	MET	301	16.154	43.498	31.231	1.00	80.41
ATOM	1995	CG	MET	301	15.177	44.253	30.325	1.00	81.85
ATOM	1996	SD	MET	301	13.933	45.244	31.185	1.00	84.34
ATOM	1997	CE	MET	301	12.458	44.235	30.946	1.00	83.29
ATOM	1998	C	MET	301	14.844	42.880	33.290	1.00	78.13
ATOM	1999	O	MET	301	15.030	44.035	33.680	1.00	78.18
ATOM	2000	N	MET	301	14.641	41.532	31.184	1.00	78.62
ATOM	2001	CA	MET	301	15.549	42.343	32.045	1.00	78.92
ATOM	2002	N	LYS	302	14.042	42.021	33.914	1.00	76.63
ATOM	2003	CA	LYS	302	13.300	42.378	35.118	1.00	75.10
ATOM	2004	CB	LYS	302	11.941	42.982	34.740	1.00	75.44
ATOM	2005	CG	LYS	302	11.997	44.455	34.355	1.00	75.76
ATOM	2006	CD	LYS	302	12.271	45.330	35.571	1.00	75.67
ATOM	2007	CE	LYS	302	11.149	45.212	36.594	1.00	75.44
ATOM	2008	NZ	LYS	302	11.411	46.017	37.817	1.00	75.82
ATOM	2009	C	LYS	302	13.091	41.203	36.082	1.00	73.54
ATOM	2010	O	LYS	302	13.159	41.380	37.300	1.00	74.12
ATOM	2011	N	PRO	303	12.847	39.987	35.554	1.00	71.41
ATOM	2012	CD	PRO	303	12.659	38.812	36.425	1.00	70.80
ATOM	2013	CA	PRO	303	12.743	39.596	34.143	1.00	69.04
ATOM	2014	CB	PRO	303	12.752	38.074	34.213	1.00	69.91
ATOM	2015	CG	PRO	303	12.025	37.812	35.486	1.00	70.53
ATOM	2016	C	PRO	303	11.499	40.136	33.444	1.00	66.77
ATOM	2017	O	PRO	303	10.485	40.417	34.083	1.00	66.86
ATOM	2018	N	THR	304	11.588	40.276	32.127	1.00	64.02
ATOM	2019	CA	THR	304	10.474	40.781	31.337	1.00	61.28
ATOM	2020	CB	THR	304	10.830	40.818	29.842	1.00	61.21
ATOM	2021	OG1	THR	304	12.085	41.486	29.668	1.00	60.91
ATOM	2022	CG2	THR	304	9.756	41.560	29.062	1.00	60.88
ATOM	2023	C	THR	304	9.247	39.897	31.525	1.00	59.60
ATOM	2024	O	THR	304	9.357	38.673	31.563	1.00	59.05
ATOM	2025	N	THR	305	8.079	40.522	31.644	1.00	57.62
ATOM	2026	CA	THR	305	6.836	39.783	31.829	1.00	55.83
ATOM	2027	CB	THR	305	6.207	40.074	33.204	1.00	55.66
ATOM	2028	OG1	THR	305	5.873	41.465	33.293	1.00	55.27
ATOM	2029	CG2	THR	305	7.176	39.713	34.317	1.00	55.55
ATOM	2030	C	THR	305	5.810	40.133	30.758	1.00	55.15

ATOM	2031	O	THR	305	5.968	41.108	30.020	1.00	54.85
ATOM	2032	N	ILE	306	4.756	39.328	30.680	1.00	54.30
ATOM	2033	CA	ILE	306	3.698	39.543	29.704	1.00	54.29
ATOM	2034	CB	ILE	306	2.606	38.462	29.821	1.00	54.32
ATOM	2035	CG2	ILE	306	1.645	38.567	28.644	1.00	54.60
ATOM	2036	CG1	ILE	306	3.249	37.074	29.846	1.00	54.90
ATOM	2037	CD1	ILE	306	2.276	35.949	30.142	1.00	55.32
ATOM	2038	C	ILE	306	3.061	40.905	29.940	1.00	54.16
ATOM	2039	O	ILE	306	2.648	41.584	28.999	1.00	53.93
ATOM	2040	N	SER	307	2.990	41.299	31.208	1.00	53.96
ATOM	2041	CA	SER	307	2.402	42.579	31.588	1.00	54.22
ATOM	2042	CB	SER	307	2.523	42.777	33.101	1.00	54.20
ATOM	2043	OG	SER	307	1.851	41.744	33.801	1.00	55.29
ATOM	2044	C	SER	307	3.064	43.745	30.855	1.00	53.77
ATOM	2045	O	SER	307	2.383	44.653	30.379	1.00	54.19
ATOM	2046	N	LEU	308	4.392	43.712	30.770	1.00	53.02
ATOM	2047	CA	LEU	308	5.142	44.761	30.092	1.00	53.53
ATOM	2048	CB	LEU	308	6.630	44.411	30.049	1.00	53.40
ATOM	2049	CG	LEU	308	7.434	44.783	31.295	1.00	54.50
ATOM	2050	CD1	LEU	308	8.837	44.205	31.202	1.00	54.63
ATOM	2051	CD2	LEU	308	7.487	46.304	31.424	1.00	54.20
ATOM	2052	C	LEU	308	4.631	44.988	28.676	1.00	53.65
ATOM	2053	O	LEU	308	4.355	46.120	28.277	1.00	53.25
ATOM	2054	N	LEU	309	4.509	43.905	27.917	1.00	53.27
ATOM	2055	CA	LEU	309	4.024	43.990	26.549	1.00	53.60
ATOM	2056	CB	LEU	309	3.994	42.599	25.914	1.00	53.39
ATOM	2057	CG	LEU	309	5.336	41.872	25.803	1.00	53.15
ATOM	2058	CD1	LEU	309	5.108	40.469	25.271	1.00	52.80
ATOM	2059	CD2	LEU	309	6.272	42.646	24.890	1.00	52.50
ATOM	2060	C	LEU	309	2.625	44.598	26.530	1.00	53.99
ATOM	2061	O	LEU	309	2.312	45.429	25.677	1.00	53.60
ATOM	2062	N	GLN	310	1.790	44.182	27.479	1.00	54.06
ATOM	2063	CA	GLN	310	0.425	44.685	27.576	1.00	55.21
ATOM	2064	CB	GLN	310	-0.319	43.979	28.716	1.00	55.07
ATOM	2065	CG	GLN	310	-1.810	44.283	28.790	1.00	55.61
ATOM	2066	CD	GLN	310	-2.577	43.772	27.581	1.00	56.41
ATOM	2067	OE1	GLN	310	-2.395	44.254	26.463	1.00	56.40
ATOM	2068	NE2	GLN	310	-3.438	42.784	27.803	1.00	57.08
ATOM	2069	C	GLN	310	0.441	46.192	27.824	1.00	56.02
ATOM	2070	O	GLN	310	-0.263	46.949	27.153	1.00	56.00
ATOM	2071	N	LYS	311	1.252	46.620	28.786	1.00	56.45
ATOM	2072	CA	LYS	311	1.366	48.036	29.121	1.00	57.85
ATOM	2073	CB	LYS	311	2.361	48.236	30.266	1.00	58.44
ATOM	2074	CG	LYS	311	2.419	49.668	30.777	1.00	59.71
ATOM	2075	CD	LYS	311	3.851	50.156	30.939	1.00	60.00
ATOM	2076	CE	LYS	311	4.611	49.364	31.989	1.00	60.14
ATOM	2077	NZ	LYS	311	6.013	49.849	32.114	1.00	59.97
ATOM	2078	C	LYS	311	1.829	48.836	27.906	1.00	57.84
ATOM	2079	O	LYS	311	1.341	49.938	27.654	1.00	57.02
ATOM	2080	N	TYR	312	2.774	48.269	27.160	1.00	58.58
ATOM	2081	CA	TYR	312	3.316	48.913	25.970	1.00	59.79
ATOM	2082	CB	TYR	312	4.369	48.014	25.314	1.00	60.90
ATOM	2083	CG	TYR	312	5.642	47.839	26.119	1.00	62.17
ATOM	2084	CD1	TYR	312	6.639	46.960	25.695	1.00	62.63
ATOM	2085	CE1	TYR	312	7.818	46.799	26.424	1.00	63.39
ATOM	2086	CD2	TYR	312	5.855	48.557	27.297	1.00	62.71
ATOM	2087	CE2	TYR	312	7.030	48.404	28.033	1.00	63.56
ATOM	2088	CZ	TYR	312	8.006	47.523	27.590	1.00	63.51
ATOM	2089	OH	TYR	312	9.170	47.369	28.311	1.00	63.95
ATOM	2090	C	TYR	312	2.230	49.243	24.954	1.00	60.36
ATOM	2091	O	TYR	312	2.287	50.279	24.289	1.00	60.60
ATOM	2092	N	LYS	313	1.244	48.360	24.830	1.00	60.33
ATOM	2093	CA	LYS	313	0.155	48.579	23.887	1.00	60.59
ATOM	2094	CB	LYS	313	-0.720	47.324	23.773	1.00	59.68
ATOM	2095	CG	LYS	313	-1.855	47.466	22.766	1.00	59.36
ATOM	2096	CD	LYS	313	-2.535	46.141	22.466	1.00	57.36
ATOM	2097	CE	LYS	313	-3.587	46.318	21.377	1.00	57.43
ATOM	2098	NZ	LYS	313	-4.149	45.027	20.902	1.00	57.01
ATOM	2099	C	LYS	313	-0.689	49.771	24.330	1.00	60.98
ATOM	2100	O	LYS	313	-1.155	50.558	23.505	1.00	60.46
ATOM	2101	N	GLN	314	-0.876	49.903	25.638	1.00	61.89
ATOM	2102	CA	GLN	314	-1.656	51.004	26.186	1.00	63.46
ATOM	2103	CB	GLN	314	-1.968	50.747	27.661	1.00	63.34
ATOM	2104	CG	GLN	314	-2.812	49.507	27.898	1.00	64.06
ATOM	2105	CD	GLN	314	-3.090	49.266	29.366	1.00	64.42
ATOM	2106	OE1	GLN	314	-3.675	50.108	30.047	1.00	64.71
ATOM	2107	NE2	GLN	314	-2.672	48.110	29.862	1.00	64.63

```
ATOM   2108  C    GLN   314     -0.890  52.313  26.040  1.00 64.13
ATOM   2109  O    GLN   314     -1.399  53.383  26.378  1.00 65.09
ATOM   2110  N    GLU   315      0.336  52.217  25.533  1.00 64.44
ATOM   2111  CA   GLU   315      1.186  53.386  25.332  1.00 64.89
ATOM   2112  CB   GLU   315      2.476  53.254  26.149  1.00 65.03
ATOM   2113  CG   GLU   315      2.250  53.017  27.632  1.00 65.70
ATOM   2114  CD   GLU   315      3.548  52.910  28.407  1.00 65.91
ATOM   2115  OE1  GLU   315      4.414  52.101  28.013  1.00 66.19
ATOM   2116  OE2  GLU   315      3.702  53.631  29.414  1.00 66.44
ATOM   2117  C    GLU   315      1.532  53.541  23.855  1.00 64.71
ATOM   2118  O    GLU   315      2.323  54.408  23.480  1.00 64.82
ATOM   2119  N    LYS   316      0.938  52.692  23.023  1.00 64.19
ATOM   2120  CA   LYS   316      1.176  52.731  21.585  1.00 64.21
ATOM   2121  CB   LYS   316      0.604  54.024  20.997  1.00 64.07
ATOM   2122  CG   LYS   316     -0.840  54.306  21.387  1.00 64.10
ATOM   2123  CD   LYS   316     -1.794  53.259  20.837  1.00 63.85
ATOM   2124  CE   LYS   316     -3.220  53.514  21.306  1.00 63.79
ATOM   2125  NZ   LYS   316     -3.703  54.874  20.934  1.00 63.74
ATOM   2126  C    LYS   316      2.671  52.643  21.276  1.00 64.35
ATOM   2127  O    LYS   316      3.157  53.260  20.327  1.00 64.34
ATOM   2128  N    LYS   317      3.395  51.876  22.087  1.00 64.27
ATOM   2129  CA   LYS   317      4.835  51.702  21.907  1.00 63.70
ATOM   2130  CB   LYS   317      5.553  51.810  23.257  1.00 64.31
ATOM   2131  CG   LYS   317      7.061  51.596  23.178  1.00 65.23
ATOM   2132  CD   LYS   317      7.689  51.451  24.560  1.00 65.71
ATOM   2133  CE   LYS   317      7.548  52.720  25.387  1.00 66.37
ATOM   2134  NZ   LYS   317      8.145  52.562  26.744  1.00 66.68
ATOM   2135  C    LYS   317      5.157  50.349  21.273  1.00 62.73
ATOM   2136  O    LYS   317      5.221  49.331  21.964  1.00 62.19
ATOM   2137  N    ARG   318      5.361  50.342  19.959  1.00 61.20
ATOM   2138  CA   ARG   318      5.682  49.109  19.250  1.00 59.98
ATOM   2139  CB   ARG   318      5.760  49.370  17.743  1.00 60.40
ATOM   2140  CG   ARG   318      4.416  49.244  17.040  1.00 61.29
ATOM   2141  CD   ARG   318      4.469  49.737  15.604  1.00 61.24
ATOM   2142  NE   ARG   318      4.450  51.196  15.528  1.00 62.30
ATOM   2143  CZ   ARG   318      4.415  51.885  14.392  1.00 62.88
ATOM   2144  NH1  ARG   318      4.397  51.249  13.227  1.00 62.95
ATOM   2145  NH2  ARG   318      4.391  53.211  14.421  1.00 62.95
ATOM   2146  C    ARG   318      6.990  48.507  19.754  1.00 58.84
ATOM   2147  O    ARG   318      8.024  49.174  19.780  1.00 58.27
ATOM   2148  N    PHE   319      6.928  47.241  20.156  1.00 57.39
ATOM   2149  CA   PHE   319      8.089  46.530  20.677  1.00 55.69
ATOM   2150  CB   PHE   319      7.725  45.856  22.005  1.00 56.21
ATOM   2151  CG   PHE   319      6.465  45.036  21.945  1.00 56.77
ATOM   2152  CD1  PHE   319      6.465  43.768  21.368  1.00 56.74
ATOM   2153  CD2  PHE   319      5.270  45.543  22.448  1.00 56.37
ATOM   2154  CE1  PHE   319      5.291  43.018  21.294  1.00 57.23
ATOM   2155  CE2  PHE   319      4.092  44.803  22.379  1.00 56.83
ATOM   2156  CZ   PHE   319      4.101  43.539  21.801  1.00 56.54
ATOM   2157  C    PHE   319      8.632  45.497  19.692  1.00 54.04
ATOM   2158  O    PHE   319      7.932  45.063  18.776  1.00 53.79
ATOM   2159  N    ALA   320      9.887  45.106  19.890  1.00 51.83
ATOM   2160  CA   ALA   320     10.527  44.135  19.013  1.00 49.46
ATOM   2161  CB   ALA   320     11.880  44.665  18.562  1.00 49.67
ATOM   2162  C    ALA   320     10.695  42.773  19.676  1.00 47.51
ATOM   2163  O    ALA   320     10.899  42.677  20.886  1.00 47.41
ATOM   2164  N    THR   321     10.607  41.721  18.869  1.00 45.20
ATOM   2165  CA   THR   321     10.755  40.355  19.357  1.00 43.60
ATOM   2166  CB   THR   321      9.383  39.692  19.579  1.00 43.59
ATOM   2167  OG1  THR   321      8.618  40.472  20.506  1.00 44.19
ATOM   2168  CG2  THR   321      9.553  38.293  20.132  1.00 44.04
ATOM   2169  C    THR   321     11.536  39.542  18.331  1.00 41.76
ATOM   2170  O    THR   321     11.456  39.804  17.130  1.00 41.89
ATOM   2171  N    ILE   322     12.290  38.551  18.798  1.00 40.55
ATOM   2172  CA   ILE   322     13.077  37.729  17.887  1.00 38.74
ATOM   2173  CB   ILE   322     14.479  38.338  17.688  1.00 39.69
ATOM   2174  CG2  ILE   322     15.310  38.150  18.954  1.00 38.21
ATOM   2175  CG1  ILE   322     15.160  37.692  16.479  1.00 39.62
ATOM   2176  CD1  ILE   322     16.436  38.388  16.055  1.00 40.64
ATOM   2177  C    ILE   322     13.220  36.289  18.375  1.00 37.51
ATOM   2178  O    ILE   322     13.037  36.005  19.557  1.00 36.20
ATOM   2179  N    THR   323     13.544  35.381  17.458  1.00 35.23
ATOM   2180  CA   THR   323     13.718  33.980  17.817  1.00 33.67
ATOM   2181  CB   THR   323     13.381  33.034  16.640  1.00 33.56
ATOM   2182  OG1  THR   323     14.346  33.202  15.596  1.00 33.89
ATOM   2183  CG2  THR   323     11.996  33.331  16.096  1.00 34.18
ATOM   2184  C    THR   323     15.158  33.717  18.244  1.00 31.77
```

```
ATOM   2185  O    THR  323      16.071  34.459  17.879  1.00 30.93
ATOM   2186  N    ALA  324      15.345  32.661  19.033  1.00 30.73
ATOM   2187  CA   ALA  324      16.662  32.257  19.518  1.00 27.91
ATOM   2188  CB   ALA  324      17.022  33.025  20.783  1.00 29.81
ATOM   2189  C    ALA  324      16.618  30.758  19.800  1.00 28.38
ATOM   2190  O    ALA  324      15.618  30.247  20.312  1.00 26.39
ATOM   2191  N    TYR  325      17.703  30.059  19.472  1.00 27.03
ATOM   2192  CA   TYR  325      17.759  28.616  19.663  1.00 27.26
ATOM   2193  CB   TYR  325      17.603  27.909  18.315  1.00 25.23
ATOM   2194  CG   TYR  325      16.645  28.596  17.372  1.00 24.94
ATOM   2195  CD1  TYR  325      17.109  29.501  16.417  1.00 23.93
ATOM   2196  CE1  TYR  325      16.234  30.125  15.533  1.00 25.04
ATOM   2197  CD2  TYR  325      15.275  28.336  17.427  1.00 23.23
ATOM   2198  CE2  TYR  325      14.392  28.954  16.552  1.00 22.55
ATOM   2199  CZ   TYR  325      14.876  29.845  15.606  1.00 24.69
ATOM   2200  OH   TYR  325      14.003  30.434  14.723  1.00 25.39
ATOM   2201  C    TYR  325      19.038  28.131  20.333  1.00 27.49
ATOM   2202  O    TYR  325      19.287  26.931  20.400  1.00 28.39
ATOM   2203  N    ASP  326      19.854  29.052  20.827  1.00 27.48
ATOM   2204  CA   ASP  326      21.082  28.647  21.488  1.00 27.27
ATOM   2205  CB   ASP  326      22.182  28.392  20.453  1.00 26.92
ATOM   2206  CG   ASP  326      22.645  29.661  19.767  1.00 27.37
ATOM   2207  OD1  ASP  326      23.394  30.439  20.397  1.00 28.68
ATOM   2208  OD2  ASP  326      22.253  29.881  18.603  1.00 28.94
ATOM   2209  C    ASP  326      21.541  29.677  22.510  1.00 28.59
ATOM   2210  O    ASP  326      20.991  30.773  22.593  1.00 30.01
ATOM   2211  N    TYR  327      22.547  29.302  23.289  1.00 28.76
ATOM   2212  CA   TYR  327      23.106  30.152  24.332  1.00 30.47
ATOM   2213  CB   TYR  327      24.203  29.385  25.073  1.00 31.91
ATOM   2214  CG   TYR  327      24.997  30.215  26.057  1.00 35.27
ATOM   2215  CD1  TYR  327      24.465  30.562  27.300  1.00 36.04
ATOM   2216  CE1  TYR  327      25.196  31.331  28.209  1.00 37.29
ATOM   2217  CD2  TYR  327      26.281  30.658  25.744  1.00 35.38
ATOM   2218  CE2  TYR  327      27.018  31.427  26.643  1.00 36.93
ATOM   2219  CZ   TYR  327      26.472  31.759  27.869  1.00 37.24
ATOM   2220  OH   TYR  327      27.198  32.521  28.755  1.00 37.97
ATOM   2221  C    TYR  327      23.677  31.461  23.793  1.00 30.48
ATOM   2222  O    TYR  327      23.216  32.543  24.148  1.00 29.09
ATOM   2223  N    SER  328      24.685  31.347  22.935  1.00 31.30
ATOM   2224  CA   SER  328      25.350  32.509  22.364  1.00 31.80
ATOM   2225  CB   SER  328      26.252  32.077  21.208  1.00 31.10
ATOM   2226  OG   SER  328      27.287  31.231  21.685  1.00 31.34
ATOM   2227  C    SER  328      24.411  33.620  21.905  1.00 33.46
ATOM   2228  O    SER  328      24.409  34.712  22.478  1.00 35.08
ATOM   2229  N    PHE  329      23.608  33.353  20.882  1.00 33.75
ATOM   2230  CA   PHE  329      22.695  34.373  20.380  1.00 35.28
ATOM   2231  CB   PHE  329      21.957  33.876  19.134  1.00 36.14
ATOM   2232  CG   PHE  329      22.794  33.915  17.884  1.00 37.89
ATOM   2233  CD1  PHE  329      23.396  32.760  17.391  1.00 37.32
ATOM   2234  CD2  PHE  329      22.995  35.117  17.207  1.00 37.37
ATOM   2235  CE1  PHE  329      24.185  32.803  16.243  1.00 37.40
ATOM   2236  CE2  PHE  329      23.781  35.169  16.061  1.00 37.67
ATOM   2237  CZ   PHE  329      24.378  34.011  15.576  1.00 38.05
ATOM   2238  C    PHE  329      21.691  34.872  21.415  1.00 36.35
ATOM   2239  O    PHE  329      21.294  36.040  21.387  1.00 35.47
ATOM   2240  N    ALA  330      21.282  33.997  22.328  1.00 36.19
ATOM   2241  CA   ALA  330      20.329  34.382  23.363  1.00 37.22
ATOM   2242  CB   ALA  330      19.929  33.159  24.187  1.00 37.12
ATOM   2243  C    ALA  330      20.930  35.453  24.275  1.00 38.43
ATOM   2244  O    ALA  330      20.284  36.456  24.587  1.00 36.62
ATOM   2245  N    LYS  331      22.169  35.224  24.703  1.00 40.16
ATOM   2246  CA   LYS  331      22.877  36.150  25.583  1.00 42.64
ATOM   2247  CB   LYS  331      24.239  35.560  25.970  1.00 43.34
ATOM   2248  CG   LYS  331      25.056  36.401  26.947  1.00 45.59
ATOM   2249  CD   LYS  331      24.494  36.320  28.362  1.00 48.66
ATOM   2250  CE   LYS  331      25.388  37.032  29.378  1.00 48.88
ATOM   2251  NZ   LYS  331      25.439  38.510  29.177  1.00 50.22
ATOM   2252  C    LYS  331      23.084  37.497  24.892  1.00 42.88
ATOM   2253  O    LYS  331      23.000  38.554  25.520  1.00 44.09
ATOM   2254  N    LEU  332      23.351  37.446  23.594  1.00 43.08
ATOM   2255  CA   LEU  332      23.588  38.645  22.807  1.00 42.72
ATOM   2256  CB   LEU  332      24.020  38.249  21.393  1.00 42.60
ATOM   2257  CG   LEU  332      24.502  39.350  20.447  1.00 42.52
ATOM   2258  CD1  LEU  332      25.490  38.763  19.448  1.00 41.43
ATOM   2259  CD2  LEU  332      23.315  39.981  19.740  1.00 42.66
ATOM   2260  C    LEU  332      22.372  39.565  22.754  1.00 43.40
ATOM   2261  O    LEU  332      22.488  40.770  22.980  1.00 42.27
```

ATOM	2262	N	PHE	333	21.204	39.004	22.463	1.00	42.78
ATOM	2263	CA	PHE	333	19.997	39.814	22.387	1.00	43.66
ATOM	2264	CB	PHE	333	18.818	38.983	21.880	1.00	43.29
ATOM	2265	CG	PHE	333	19.080	38.289	20.580	1.00	43.11
ATOM	2266	CD1	PHE	333	19.750	38.942	19.548	1.00	42.14
ATOM	2267	CD2	PHE	333	18.640	36.986	20.379	1.00	42.92
ATOM	2268	CE1	PHE	333	19.977	38.306	18.334	1.00	42.67
ATOM	2269	CE2	PHE	333	18.860	36.341	19.169	1.00	42.88
ATOM	2270	CZ	PHE	333	19.531	37.001	18.141	1.00	42.87
ATOM	2271	C	PHE	333	19.651	40.933	23.747	1.00	44.42
ATOM	2272	O	PHE	333	19.189	41.530	23.851	1.00	43.85
ATOM	2273	N	ALA	334	19.881	39.600	24.789	1.00	45.14
ATOM	2274	CA	ALA	334	19.592	40.017	26.154	1.00	45.59
ATOM	2275	CB	ALA	334	19.912	38.884	27.121	1.00	45.78
ATOM	2276	C	ALA	334	20.376	41.263	26.538	1.00	45.65
ATOM	2277	O	ALA	334	19.837	42.179	27.162	1.00	46.18
ATOM	2278	N	ASP	335	21.649	41.296	26.160	1.00	45.92
ATOM	2279	CA	ASP	335	22.509	42.429	26.482	1.00	45.71
ATOM	2280	CB	ASP	335	23.977	42.019	26.388	1.00	44.57
ATOM	2281	CG	ASP	335	24.277	40.767	27.177	1.00	43.56
ATOM	2282	OD1	ASP	335	23.536	40.484	28.141	1.00	43.70
ATOM	2283	OD2	ASP	335	25.258	40.071	26.840	1.00	43.87
ATOM	2284	C	ASP	335	22.262	43.629	25.585	1.00	46.23
ATOM	2285	O	ASP	335	22.912	44.660	25.733	1.00	46.45
ATOM	2286	N	GLU	336	21.324	43.491	24.654	1.00	47.36
ATOM	2287	CA	GLU	336	20.999	44.580	23.741	1.00	49.00
ATOM	2288	CB	GLU	336	21.063	44.099	22.290	1.00	49.86
ATOM	2289	CG	GLU	336	22.459	43.725	21.828	1.00	51.33
ATOM	2290	CD	GLU	336	23.450	44.861	22.006	1.00	52.76
ATOM	2291	OE1	GLU	336	23.232	45.943	21.418	1.00	53.76
ATOM	2292	OE2	GLU	336	24.443	44.672	22.741	1.00	53.33
ATOM	2293	C	GLU	336	19.620	45.156	24.026	1.00	49.27
ATOM	2294	O	GLU	336	19.171	46.076	23.341	1.00	49.79
ATOM	2295	N	GLY	337	18.948	44.608	25.033	1.00	49.15
ATOM	2296	CA	GLY	337	17.627	45.094	25.386	1.00	49.61
ATOM	2297	C	GLY	337	16.497	44.169	24.981	1.00	50.11
ATOM	2298	O	GLY	337	15.372	44.318	25.458	1.00	49.98
ATOM	2299	N	LEU	338	16.788	43.219	24.095	1.00	50.32
ATOM	2300	CA	LEU	338	15.779	42.267	23.637	1.00	50.74
ATOM	2301	CB	LEU	338	16.108	41.781	22.223	1.00	50.90
ATOM	2302	CG	LEU	338	15.750	42.728	21.079	1.00	51.60
ATOM	2303	CD1	LEU	338	16.237	42.143	19.763	1.00	52.47
ATOM	2304	CD2	LEU	338	14.243	42.943	21.044	1.00	52.43
ATOM	2305	C	LEU	338	15.674	41.073	24.575	1.00	50.23
ATOM	2306	O	LEU	338	16.430	40.109	24.459	1.00	50.85
ATOM	2307	N	ASN	339	14.729	41.146	25.506	1.00	49.73
ATOM	2308	CA	ASN	339	14.514	40.076	26.469	1.00	48.47
ATOM	2309	CB	ASN	339	14.536	40.647	27.889	1.00	50.75
ATOM	2310	CG	ASN	339	15.942	40.986	28.359	1.00	52.34
ATOM	2311	OD1	ASN	339	16.706	40.105	28.759	1.00	52.97
ATOM	2312	ND2	ASN	339	16.293	42.267	28.301	1.00	52.70
ATOM	2313	C	ASN	339	13.194	39.355	26.204	1.00	46.90
ATOM	2314	O	ASN	339	12.490	38.961	27.129	1.00	46.89
ATOM	2315	N	VAL	340	12.865	39.195	24.927	1.00	44.67
ATOM	2316	CA	VAL	340	11.645	38.509	24.518	1.00	43.58
ATOM	2317	CB	VAL	340	10.563	39.501	24.072	1.00	43.60
ATOM	2318	CG1	VAL	340	9.272	38.758	23.779	1.00	43.89
ATOM	2319	CG2	VAL	340	10.343	40.550	25.147	1.00	43.92
ATOM	2320	C	VAL	340	11.991	37.597	23.345	1.00	42.70
ATOM	2321	O	VAL	340	11.806	37.959	22.182	1.00	42.88
ATOM	2322	N	MET	341	12.496	36.410	23.667	1.00	41.15
ATOM	2323	CA	MET	341	12.910	35.436	22.664	1.00	37.91
ATOM	2324	CB	MET	341	14.278	34.874	23.056	1.00	38.70
ATOM	2325	CG	MET	341	15.403	35.893	22.946	1.00	38.98
ATOM	2326	SD	MET	341	16.816	35.520	23.975	1.00	43.33
ATOM	2327	CE	MET	341	16.743	36.882	25.141	1.00	41.65
ATOM	2328	C	MET	341	11.910	34.299	22.461	1.00	36.58
ATOM	2329	O	MET	341	11.208	33.895	23.389	1.00	34.24
ATOM	2330	N	LEU	342	11.858	33.784	21.236	1.00	33.02
ATOM	2331	CA	LEU	342	10.949	32.697	20.904	1.00	31.78
ATOM	2332	CB	LEU	342	9.873	33.204	19.930	1.00	33.59
ATOM	2333	CG	LEU	342	8.868	32.254	19.260	1.00	35.82
ATOM	2334	CD1	LEU	342	9.491	31.606	18.041	1.00	36.45
ATOM	2335	CD2	LEU	342	8.380	31.210	20.256	1.00	35.85
ATOM	2336	C	LEU	342	11.671	31.485	20.317	1.00	28.89
ATOM	2337	O	LEU	342	12.390	31.594	19.324	1.00	28.45
ATOM	2338	N	VAL	343	11.494	30.334	20.957	1.00	25.63

```
ATOM    2339  CA  VAL   343     12.099  29.093  20.483  1.00 24.23
ATOM    2340  CB  VAL   343     12.543  28.193  21.664  1.00 24.85
ATOM    2341  CG1 VAL   343     13.222  26.942  21.135  1.00 24.17
ATOM    2342  CG2 VAL   343     13.490  28.960  22.585  1.00 24.85
ATOM    2343  C   VAL   343     11.001  28.393  19.685  1.00 23.87
ATOM    2344  O   VAL   343     10.253  27.575  20.220  1.00 23.67
ATOM    2345  N   GLY   344     10.900  28.737  18.404  1.00 23.68
ATOM    2346  CA  GLY   344      9.871  28.152  17.562  1.00 24.64
ATOM    2347  C   GLY   344     10.312  26.961  16.736  1.00 23.93
ATOM    2348  O   GLY   344     11.507  26.689  16.621  1.00 22.71
ATOM    2349  N   ASP   345      9.340  26.253  16.161  1.00 23.97
ATOM    2350  CA  ASP   345      9.625  25.087  15.342  1.00 24.30
ATOM    2351  CB  ASP   345      8.342  24.306  15.022  1.00 26.36
ATOM    2352  CG  ASP   345      7.201  25.196  14.563  1.00 26.89
ATOM    2353  OD1 ASP   345      7.454  26.315  14.068  1.00 27.29
ATOM    2354  OD2 ASP   345      6.042  24.759  14.691  1.00 28.98
ATOM    2355  C   ASP   345     10.337  25.464  14.051  1.00 25.12
ATOM    2356  O   ASP   345     10.707  24.597  13.260  1.00 25.35
ATOM    2357  N   SER   346     10.538  26.761  13.840  1.00 24.45
ATOM    2358  CA  SER   346     11.237  27.218  12.649  1.00 23.43
ATOM    2359  CB  SER   346     11.273  28.749  12.603  1.00 23.92
ATOM    2360  OG  SER   346     11.844  29.276  13.786  1.00 27.17
ATOM    2361  C   SER   346     12.655  26.655  12.705  1.00 23.97
ATOM    2362  O   SER   346     13.330  26.533  11.685  1.00 24.80
ATOM    2363  N   LEU   347     13.090  26.295  13.909  1.00 22.27
ATOM    2364  CA  LEU   347     14.417  25.730  14.106  1.00 22.38
ATOM    2365  CB  LEU   347     14.664  25.473  15.601  1.00 22.34
ATOM    2366  CG  LEU   347     13.793  24.461  16.355  1.00 23.80
ATOM    2367  CD1 LEU   347     14.374  23.052  16.197  1.00 21.37
ATOM    2368  CD2 LEU   347     13.746  24.838  17.831  1.00 22.86
ATOM    2369  C   LEU   347     14.548  24.426  13.313  1.00 21.48
ATOM    2370  O   LEU   347     15.653  23.970  13.033  1.00 22.19
ATOM    2371  N   GLY   348     13.413  23.835  12.955  1.00 22.76
ATOM    2372  CA  GLY   348     13.439  22.601  12.196  1.00 23.34
ATOM    2373  C   GLY   348     14.005  22.837  10.814  1.00 24.59
ATOM    2374  O   GLY   348     14.534  21.927  10.179  1.00 24.89
ATOM    2375  N   MET   349     13.908  24.078  10.351  1.00 25.57
ATOM    2376  CA  MET   349     14.408  24.431   9.034  1.00 27.75
ATOM    2377  CB  MET   349     13.349  25.255   8.290  1.00 28.73
ATOM    2378  CG  MET   349     12.062  24.479   8.029  1.00 32.37
ATOM    2379  SD  MET   349     10.740  25.431   7.229  1.00 34.95
ATOM    2380  CE  MET   349     11.415  25.598   5.580  1.00 34.51
ATOM    2381  C   MET   349     15.729  25.191   9.118  1.00 27.11
ATOM    2382  O   MET   349     16.700  24.839   8.448  1.00 26.59
ATOM    2383  N   THR   350     15.774  26.205   9.975  1.00 27.84
ATOM    2384  CA  THR   350     16.965  27.031  10.133  1.00 28.17
ATOM    2385  CB  THR   350     16.594  28.375  10.805  1.00 31.28
ATOM    2386  OG1 THR   350     17.720  29.258  10.770  1.00 34.87
ATOM    2387  CG2 THR   350     16.181  28.151  12.249  1.00 31.41
ATOM    2388  C   THR   350     18.098  26.370  10.926  1.00 28.30
ATOM    2389  O   THR   350     19.275  26.666  10.713  1.00 27.38
ATOM    2390  N   VAL   351     17.747  25.470  11.836  1.00 26.54
ATOM    2391  CA  VAL   351     18.750  24.792  12.648  1.00 26.15
ATOM    2392  CB  VAL   351     18.337  24.800  14.136  1.00 27.12
ATOM    2393  CG1 VAL   351     19.340  24.010  14.966  1.00 26.33
ATOM    2394  CG2 VAL   351     18.238  26.239  14.633  1.00 26.84
ATOM    2395  C   VAL   351     18.995  23.347  12.214  1.00 25.31
ATOM    2396  O   VAL   351     20.138  22.943  12.023  1.00 23.95
ATOM    2397  N   GLN   352     17.920  22.574  12.064  1.00 24.36
ATOM    2398  CA  GLN   352     18.036  21.169  11.673  1.00 23.55
ATOM    2399  CB  GLN   352     16.839  20.370  12.200  1.00 23.18
ATOM    2400  CG  GLN   352     16.508  20.642  13.670  1.00 21.36
ATOM    2401  CD  GLN   352     15.365  19.785  14.186  1.00 20.35
ATOM    2402  OE1 GLN   352     14.468  19.417  13.434  1.00 19.01
ATOM    2403  NE2 GLN   352     15.387  19.476  15.484  1.00 18.25
ATOM    2404  C   GLN   352     18.156  20.972  10.159  1.00 24.30
ATOM    2405  O   GLN   352     18.727  19.982   9.703  1.00 24.86
ATOM    2406  N   GLY   353     17.602  21.900   9.385  1.00 24.94
ATOM    2407  CA  GLY   353     17.688  21.796   7.938  1.00 26.08
ATOM    2408  C   GLY   353     16.607  20.985   7.245  1.00 28.43
ATOM    2409  O   GLY   353     16.866  20.335   6.229  1.00 29.40
ATOM    2410  N   HIS   354     15.393  21.020   7.781  1.00 28.07
ATOM    2411  CA  HIS   354     14.280  20.291   7.192  1.00 29.87
ATOM    2412  CB  HIS   354     13.328  19.807   8.286  1.00 28.92
ATOM    2413  CG  HIS   354     13.906  18.740   9.161  1.00 28.40
ATOM    2414  CD2 HIS   354     14.175  18.722  10.488  1.00 28.09
ATOM    2415  ND1 HIS   354     14.272  17.501   8.679  1.00 28.16
```

```
ATOM   2416  CE1 HIS   354    14.741  16.766   9.671  1.00 28.40
ATOM   2417  NE2 HIS   354    14.693  17.484  10.780  1.00 27.51
ATOM   2418  C   HIS   354    13.520  21.162   6.198  1.00 31.29
ATOM   2419  O   HIS   354    13.625  22.389   6.227  1.00 31.35
ATOM   2420  N   ASP   355    12.755  20.518   5.320  1.00 33.89
ATOM   2421  CA  ASP   355    11.972  21.224   4.305  1.00 34.61
ATOM   2422  CB  ASP   355    11.479  20.231   3.245  1.00 38.73
ATOM   2423  CG  ASP   355    10.673  19.085   3.842  1.00 41.27
ATOM   2424  OD1 ASP   355     9.606  19.349   4.430  1.00 43.21
ATOM   2425  OD2 ASP   355    11.109  17.916   3.719  1.00 44.12
ATOM   2426  C   ASP   355    10.786  21.953   4.928  1.00 34.04
ATOM   2427  O   ASP   355    10.248  22.898   4.348  1.00 33.77
ATOM   2428  N   SER   356    10.382  21.503   6.111  1.00 31.25
ATOM   2429  CA  SER   356     9.268  22.106   6.832  1.00 29.42
ATOM   2430  CB  SER   356     7.963  21.353   6.531  1.00 29.55
ATOM   2431  OG  SER   356     7.976  20.046   7.086  1.00 30.40
ATOM   2432  C   SER   356     9.564  22.058   8.330  1.00 26.94
ATOM   2433  O   SER   356    10.642  21.627   8.739  1.00 26.83
ATOM   2434  N   THR   357     8.612  22.498   9.145  1.00 26.28
ATOM   2435  CA  THR   357     8.803  22.491  10.592  1.00 24.80
ATOM   2436  CB  THR   357     8.205  23.749  11.254  1.00 23.50
ATOM   2437  OG1 THR   357     6.780  23.735  11.093  1.00 25.56
ATOM   2438  CG2 THR   357     8.777  25.017  10.630  1.00 26.01
ATOM   2439  C   THR   357     8.141  21.288  11.252  1.00 22.76
ATOM   2440  O   THR   357     8.262  21.106  12.458  1.00 21.76
ATOM   2441  N   LEU   358     7.449  20.466  10.470  1.00 21.94
ATOM   2442  CA  LEU   358     6.757  19.306  11.036  1.00 20.73
ATOM   2443  CB  LEU   358     5.987  18.553   9.946  1.00 22.06
ATOM   2444  CG  LEU   358     4.696  19.207   9.447  1.00 22.23
ATOM   2445  CD1 LEU   358     5.036  20.431   8.609  1.00 24.54
ATOM   2446  CD2 LEU   358     3.901  18.213   8.623  1.00 21.61
ATOM   2447  C   LEU   358     7.620  18.311  11.807  1.00 19.69
ATOM   2448  O   LEU   358     7.169  17.732  12.792  1.00 19.43
ATOM   2449  N   PRO   359     8.861  18.077  11.359  1.00 19.49
ATOM   2450  CD  PRO   359     9.445  18.471  10.067  1.00 20.99
ATOM   2451  CA  PRO   359     9.738  17.130  12.057  1.00 19.78
ATOM   2452  CB  PRO   359    10.917  16.974  11.095  1.00 21.23
ATOM   2453  CG  PRO   359    10.905  18.271  10.325  1.00 25.57
ATOM   2454  C   PRO   359    10.184  17.534  13.461  1.00 18.27
ATOM   2455  O   PRO   359    10.685  16.705  14.225  1.00 16.56
ATOM   2456  N   VAL   360     9.993  18.800  13.806  1.00 17.80
ATOM   2457  CA  VAL   360    10.397  19.290  15.116  1.00 17.74
ATOM   2458  CB  VAL   360    10.204  20.816  15.226  1.00 16.25
ATOM   2459  CG1 VAL   360    10.676  21.301  16.582  1.00 15.89
ATOM   2460  CG2 VAL   360    10.967  21.508  14.114  1.00 16.99
ATOM   2461  C   VAL   360     9.589  18.608  16.205  1.00 17.81
ATOM   2462  O   VAL   360     8.362  18.577  16.152  1.00 16.42
ATOM   2463  N   THR   361    10.280  18.056  17.195  1.00 18.83
ATOM   2464  CA  THR   361     9.594  17.376  18.283  1.00 19.94
ATOM   2465  CB  THR   361    10.216  15.983  18.540  1.00 23.20
ATOM   2466  OG1 THR   361    10.537  15.352  17.289  1.00 26.54
ATOM   2467  CG2 THR   361     9.221  15.091  19.257  1.00 27.25
ATOM   2468  C   THR   361     9.656  18.195  19.571  1.00 19.28
ATOM   2469  O   THR   361    10.442  19.138  19.679  1.00 17.95
ATOM   2470  N   VAL   362     8.820  17.841  20.544  1.00 17.01
ATOM   2471  CA  VAL   362     8.807  18.545  21.827  1.00 17.54
ATOM   2472  CB  VAL   362     7.753  17.930  22.787  1.00 16.12
ATOM   2473  CG1 VAL   362     7.835  18.598  24.156  1.00 15.29
ATOM   2474  CG2 VAL   362     6.352  18.108  22.198  1.00 16.25
ATOM   2475  C   VAL   362    10.202  18.463  22.450  1.00 16.96
ATOM   2476  O   VAL   362    10.703  19.445  22.989  1.00 16.86
ATOM   2477  N   ALA   363    10.829  17.293  22.351  1.00 17.98
ATOM   2478  CA  ALA   363    12.164  17.088  22.903  1.00 18.14
ATOM   2479  CB  ALA   363    12.638  15.659  22.632  1.00 20.14
ATOM   2480  C   ALA   363    13.161  18.086  22.327  1.00 18.21
ATOM   2481  O   ALA   363    14.042  18.574  23.043  1.00 17.54
ATOM   2482  N   ASP   364    13.029  18.378  21.032  1.00 16.91
ATOM   2483  CA  ASP   364    13.923  19.334  20.371  1.00 16.57
ATOM   2484  CB  ASP   364    13.661  19.410  18.854  1.00 15.99
ATOM   2485  CG  ASP   364    13.951  18.099  18.123  1.00 17.52
ATOM   2486  OD1 ASP   364    14.817  17.312  18.572  1.00 15.98
ATOM   2487  OD2 ASP   364    13.311  17.873  17.072  1.00 19.08
ATOM   2488  C   ASP   364    13.691  20.720  20.974  1.00 15.38
ATOM   2489  O   ASP   364    14.638  21.421  21.320  1.00 17.32
ATOM   2490  N   ILE   365    12.427  21.115  21.088  1.00 17.64
ATOM   2491  CA  ILE   365    12.092  22.422  21.651  1.00 16.80
ATOM   2492  CB  ILE   365    10.561  22.646  21.717  1.00 16.19
```

ATOM	2493	CG2	ILE	365	10.265	23.986	22.395	1.00	19.39
ATOM	2494	CG1	ILE	365	9.946	22.599	20.310	1.00	16.26
ATOM	2495	CD1	ILE	365	10.399	23.713	19.379	1.00	17.28
ATOM	2496	C	ILE	365	12.646	22.560	23.066	1.00	16.75
ATOM	2497	O	ILE	365	13.217	23.596	23.423	1.00	15.83
ATOM	2498	N	ALA	366	12.474	21.518	23.878	1.00	15.24
ATOM	2499	CA	ALA	366	12.959	21.549	25.260	1.00	15.66
ATOM	2500	CB	ALA	366	12.533	20.278	25.999	1.00	15.05
ATOM	2501	C	ALA	366	14.474	21.688	25.292	1.00	15.90
ATOM	2502	O	ALA	366	15.036	22.363	26.161	1.00	16.01
ATOM	2503	N	TYR	367	15.136	21.040	24.341	1.00	15.21
ATOM	2504	CA	TYR	367	16.596	21.093	24.247	1.00	15.10
ATOM	2505	CB	TYR	367	17.082	20.191	23.106	1.00	14.11
ATOM	2506	CG	TYR	367	18.577	20.270	22.837	1.00	15.47
ATOM	2507	CD1	TYR	367	19.504	19.782	23.755	1.00	15.21
ATOM	2508	CE1	TYR	367	20.881	19.830	23.492	1.00	16.91
ATOM	2509	CD2	TYR	367	19.060	20.815	21.651	1.00	17.33
ATOM	2510	CE2	TYR	367	20.428	20.868	21.382	1.00	17.98
ATOM	2511	CZ	TYR	367	21.330	20.371	22.306	1.00	16.29
ATOM	2512	OH	TYR	367	22.681	20.386	22.013	1.00	15.79
ATOM	2513	C	TYR	367	17.051	22.525	23.986	1.00	16.84
ATOM	2514	O	TYR	367	17.918	23.063	24.688	1.00	17.12
ATOM	2515	N	HIS	368	16.467	23.141	22.965	1.00	17.61
ATOM	2516	CA	HIS	368	16.831	24.511	22.611	1.00	19.23
ATOM	2517	CB	HIS	368	16.277	24.847	21.220	1.00	18.64
ATOM	2518	CG	HIS	368	16.970	24.112	20.114	1.00	19.41
ATOM	2519	CD2	HIS	368	16.608	23.014	19.409	1.00	19.84
ATOM	2520	ND1	HIS	368	18.241	24.438	19.690	1.00	20.14
ATOM	2521	CE1	HIS	368	18.633	23.570	18.775	1.00	20.20
ATOM	2522	NE2	HIS	368	17.662	22.694	18.587	1.00	20.30
ATOM	2523	C	HIS	368	16.360	25.516	23.661	1.00	20.01
ATOM	2524	O	HIS	368	17.047	26.500	23.936	1.00	21.66
ATOM	2525	N	THR	369	15.202	25.258	24.259	1.00	19.85
ATOM	2526	CA	THR	369	14.677	26.143	25.289	1.00	21.15
ATOM	2527	CB	THR	369	13.305	25.659	25.796	1.00	21.21
ATOM	2528	OG1	THR	369	12.336	25.804	24.750	1.00	22.15
ATOM	2529	CG2	THR	369	12.860	26.466	27.012	1.00	21.16
ATOM	2530	C	THR	369	15.634	26.241	26.474	1.00	22.56
ATOM	2531	O	THR	369	15.905	27.338	26.974	1.00	23.65
ATOM	2532	N	ALA	370	16.154	25.100	26.918	1.00	21.27
ATOM	2533	CA	ALA	370	17.078	25.078	28.051	1.00	23.22
ATOM	2534	CB	ALA	370	17.481	23.640	28.372	1.00	22.74
ATOM	2535	C	ALA	370	18.322	25.913	27.752	1.00	24.33
ATOM	2536	O	ALA	370	18.775	26.694	28.593	1.00	24.36
ATOM	2537	N	ALA	371	18.862	25.744	26.548	1.00	24.54
ATOM	2538	CA	ALA	371	20.050	26.480	26.115	1.00	26.15
ATOM	2539	CB	ALA	371	20.465	26.019	24.719	1.00	24.54
ATOM	2540	C	ALA	371	19.795	27.986	26.109	1.00	27.22
ATOM	2541	O	ALA	371	20.610	28.766	26.601	1.00	29.91
ATOM	2542	N	VAL	372	18.662	28.387	25.543	1.00	27.69
ATOM	2543	CA	VAL	372	18.299	29.796	25.473	1.00	28.62
ATOM	2544	CB	VAL	372	16.975	29.992	24.699	1.00	29.37
ATOM	2545	CG1	VAL	372	16.541	31.448	24.749	1.00	28.12
ATOM	2546	CG2	VAL	372	17.154	29.546	23.257	1.00	29.50
ATOM	2547	C	VAL	372	18.153	30.393	26.868	1.00	29.28
ATOM	2548	O	VAL	372	18.633	31.499	27.130	1.00	28.13
ATOM	2549	N	ARG	373	17.496	29.661	27.762	1.00	29.17
ATOM	2550	CA	ARG	373	17.299	30.138	29.128	1.00	29.87
ATOM	2551	CB	ARG	373	16.500	29.118	29.951	1.00	29.61
ATOM	2552	CG	ARG	373	16.378	29.474	31.437	1.00	29.17
ATOM	2553	CD	ARG	373	15.773	30.858	31.623	1.00	26.49
ATOM	2554	NE	ARG	373	14.370	30.903	31.228	1.00	28.14
ATOM	2555	CZ	ARG	373	13.703	32.022	30.961	1.00	27.87
ATOM	2556	NH1	ARG	373	14.307	33.199	31.042	1.00	27.29
ATOM	2557	NH2	ARG	373	12.427	31.967	30.614	1.00	28.85
ATOM	2558	C	ARG	373	18.630	30.415	29.811	1.00	31.14
ATOM	2559	O	ARG	373	18.763	31.394	30.547	1.00	31.51
ATOM	2560	N	ARG	374	19.615	29.554	29.573	1.00	32.05
ATOM	2561	CA	ARG	374	20.928	29.743	30.175	1.00	34.06
ATOM	2562	CB	ARG	374	21.873	28.597	29.798	1.00	33.29
ATOM	2563	CG	ARG	374	21.388	27.221	30.202	1.00	33.93
ATOM	2564	CD	ARG	374	22.522	26.212	30.150	1.00	32.70
ATOM	2565	NE	ARG	374	22.071	24.854	30.450	1.00	33.93
ATOM	2566	CZ	ARG	374	21.510	24.033	29.565	1.00	33.76
ATOM	2567	NH1	ARG	374	21.329	24.423	28.311	1.00	30.05
ATOM	2568	NH2	ARG	374	21.131	22.817	29.936	1.00	33.89
ATOM	2569	C	ARG	374	21.532	31.066	29.713	1.00	34.72

ATOM	2570	O	ARG	374	22.160	31.780	30.496	1.00	36.00
ATOM	2571	N	GLY	375	21.331	31.388	28.439	1.00	35.42
ATOM	2572	CA	GLY	375	21.866	32.621	27.892	1.00	36.12
ATOM	2573	C	GLY	375	21.128	33.871	28.331	1.00	36.83
ATOM	2574	O	GLY	375	21.711	34.954	28.352	1.00	36.60
ATOM	2575	N	ALA	376	19.851	33.724	28.683	1.00	36.57
ATOM	2576	CA	ALA	376	19.027	34.851	29.114	1.00	37.33
ATOM	2577	CB	ALA	376	18.332	35.474	27.906	1.00	36.41
ATOM	2578	C	ALA	376	17.985	34.414	30.145	1.00	37.86
ATOM	2579	O	ALA	376	16.805	34.265	29.827	1.00	38.51
ATOM	2580	N	PRO	377	18.410	34.215	31.401	1.00	38.37
ATOM	2581	CD	PRO	377	19.789	34.359	31.901	1.00	38.55
ATOM	2582	CA	PRO	377	17.509	33.790	32.478	1.00	38.64
ATOM	2583	CB	PRO	377	18.474	33.389	33.586	1.00	39.17
ATOM	2584	CG	PRO	377	19.588	34.359	33.404	1.00	38.79
ATOM	2585	C	PRO	377	16.513	34.851	32.936	1.00	38.71
ATOM	2586	O	PRO	377	15.691	34.596	33.814	1.00	38.56
ATOM	2587	N	ASN	378	16.580	36.033	32.334	1.00	38.88
ATOM	2588	CA	ASN	378	15.682	37.120	32.707	1.00	39.81
ATOM	2589	CB	ASN	378	16.490	38.288	33.279	1.00	41.15
ATOM	2590	CG	ASN	378	17.316	37.889	34.484	1.00	41.16
ATOM	2591	OD1	ASN	378	16.779	37.468	35.504	1.00	42.22
ATOM	2592	ND2	ASN	378	18.632	38.018	34.369	1.00	43.85
ATOM	2593	C	ASN	378	14.838	37.613	31.540	1.00	39.91
ATOM	2594	O	ASN	378	14.375	38.754	31.541	1.00	42.79
ATOM	2595	N	CYS	379	14.635	36.763	30.541	1.00	38.30
ATOM	2596	CA	CYS	379	13.843	37.164	29.383	1.00	36.58
ATOM	2597	CB	CYS	379	14.585	36.836	28.088	1.00	36.64
ATOM	2598	SG	CYS	379	14.422	35.102	27.558	1.00	37.37
ATOM	2599	C	CYS	379	12.494	36.460	29.355	1.00	34.98
ATOM	2600	O	CYS	379	12.290	35.465	30.039	1.00	35.06
ATOM	2601	N	LEU	380	11.576	37.002	28.565	1.00	33.89
ATOM	2602	CA	LEU	380	10.261	36.411	28.397	1.00	32.87
ATOM	2603	CB	LEU	380	9.261	37.459	27.910	1.00	34.44
ATOM	2604	CG	LEU	380	7.810	36.999	27.743	1.00	34.49
ATOM	2605	CD1	LEU	380	7.243	36.590	29.094	1.00	36.11
ATOM	2606	CD2	LEU	380	6.982	38.120	27.139	1.00	36.04
ATOM	2607	C	LEU	380	10.485	35.353	27.319	1.00	32.33
ATOM	2608	O	LEU	380	10.675	35.686	26.147	1.00	31.37
ATOM	2609	N	LEU	381	10.477	34.083	27.715	1.00	30.46
ATOM	2610	CA	LEU	381	10.726	32.994	26.775	1.00	28.43
ATOM	2611	CB	LEU	381	11.683	31.976	27.416	1.00	28.20
ATOM	2612	CG	LEU	381	12.577	31.092	26.539	1.00	29.26
ATOM	2613	CD1	LEU	381	13.529	30.320	27.435	1.00	28.20
ATOM	2614	CD2	LEU	381	11.746	30.134	25.695	1.00	31.72
ATOM	2615	C	LEU	381	9.463	32.284	26.308	1.00	26.84
ATOM	2616	O	LEU	381	8.751	31.672	27.104	1.00	25.66
ATOM	2617	N	LEU	382	9.184	32.377	25.013	1.00	25.90
ATOM	2618	CA	LEU	382	8.026	31.706	24.436	1.00	26.12
ATOM	2619	CB	LEU	382	7.317	32.600	23.415	1.00	27.68
ATOM	2620	CG	LEU	382	6.383	33.685	23.955	1.00	29.10
ATOM	2621	CD1	LEU	382	7.172	34.713	24.751	1.00	29.94
ATOM	2622	CD2	LEU	382	5.667	34.344	22.779	1.00	30.46
ATOM	2623	C	LEU	382	8.528	30.450	23.743	1.00	24.87
ATOM	2624	O	LEU	382	9.485	30.499	22.973	1.00	24.72
ATOM	2625	N	ALA	383	7.888	29.323	24.027	1.00	24.02
ATOM	2626	CA	ALA	383	8.286	28.060	23.422	1.00	22.33
ATOM	2627	CB	ALA	383	8.631	27.050	24.503	1.00	22.02
ATOM	2628	C	ALA	383	7.157	27.530	22.567	1.00	20.94
ATOM	2629	O	ALA	383	6.016	27.446	23.017	1.00	20.60
ATOM	2630	N	ASP	384	7.467	27.165	21.331	1.00	20.39
ATOM	2631	CA	ASP	384	6.440	26.631	20.448	1.00	20.57
ATOM	2632	CB	ASP	384	6.888	26.689	18.995	1.00	22.20
ATOM	2633	CG	ASP	384	6.278	27.847	18.232	1.00	24.06
ATOM	2634	OD1	ASP	384	5.235	28.372	18.661	1.00	26.53
ATOM	2635	OD2	ASP	384	6.842	28.206	17.187	1.00	26.60
ATOM	2636	C	ASP	384	6.139	25.180	20.751	1.00	18.93
ATOM	2637	O	ASP	384	7.027	24.425	21.139	1.00	19.05
ATOM	2638	N	LEU	385	4.877	24.800	20.590	1.00	19.70
ATOM	2639	CA	LEU	385	4.504	23.398	20.725	1.00	19.65
ATOM	2640	CB	LEU	385	3.133	23.222	21.374	1.00	17.71
ATOM	2641	CG	LEU	385	3.087	23.370	22.901	1.00	16.98
ATOM	2642	CD1	LEU	385	1.716	22.965	23.429	1.00	15.13
ATOM	2643	CD2	LEU	385	4.162	22.498	23.523	1.00	16.02
ATOM	2644	C	LEU	385	4.462	23.012	19.246	1.00	20.97
ATOM	2645	O	LEU	385	3.705	23.596	18.461	1.00	21.82
ATOM	2646	N	PRO	386	5.303	22.047	18.841	1.00	19.88

```
ATOM    2647  CD   PRO   386       6.168  21.273  19.747  1.00 20.26
ATOM    2648  CA   PRO   386       5.416  21.554  17.466  1.00 19.86
ATOM    2649  CB   PRO   386       6.626  20.633  17.537  1.00 21.72
ATOM    2650  CG   PRO   386       6.512  20.061  18.921  1.00 20.75
ATOM    2651  C    PRO   386       4.184  20.846  16.905  1.00 19.67
ATOM    2652  O    PRO   386       3.167  20.679  17.586  1.00 19.34
ATOM    2653  N    PHE   387       4.300  20.437  15.647  1.00 19.25
ATOM    2654  CA   PHE   387       3.248  19.739  14.927  1.00 18.90
ATOM    2655  CB   PHE   387       3.820  19.249  13.580  1.00 20.39
ATOM    2656  CG   PHE   387       2.955  18.253  12.861  1.00 20.40
ATOM    2657  CD1  PHE   387       1.653  18.573  12.479  1.00 21.35
ATOM    2658  CD2  PHE   387       3.457  16.992  12.545  1.00 21.11
ATOM    2659  CE1  PHE   387       0.863  17.651  11.789  1.00 22.07
ATOM    2660  CE2  PHE   387       2.681  16.064  11.858  1.00 19.74
ATOM    2661  CZ   PHE   387       1.377  16.394  11.478  1.00 21.80
ATOM    2662  C    PHE   387       2.687  18.571  15.741  1.00 18.09
ATOM    2663  O    PHE   387       3.435  17.728  16.243  1.00 17.02
ATOM    2664  N    MET   388       1.363  18.562  15.881  1.00 17.04
ATOM    2665  CA   MET   388       0.615  17.528  16.589  1.00 18.41
ATOM    2666  CB   MET   388       0.742  16.197  15.839  1.00 19.83
ATOM    2667  CG   MET   388      -0.430  15.255  16.044  1.00 19.70
ATOM    2668  SD   MET   388      -1.962  15.929  15.362  1.00 19.18
ATOM    2669  CE   MET   388      -1.899  15.299  13.685  1.00 23.05
ATOM    2670  C    MET   388       0.986  17.332  18.062  1.00 18.34
ATOM    2671  O    MET   388       0.779  16.254  18.622  1.00 19.91
ATOM    2672  N    ALA   389       1.520  18.376  18.688  1.00 17.11
ATOM    2673  CA   ALA   389       1.896  18.314  20.099  1.00 17.62
ATOM    2674  CB   ALA   389       3.178  19.124  20.345  1.00 16.15
ATOM    2675  C    ALA   389       0.764  18.839  20.987  1.00 17.04
ATOM    2676  O    ALA   389       0.893  18.891  22.211  1.00 17.48
ATOM    2677  N    TYR   390      -0.343  19.231  20.367  1.00 17.06
ATOM    2678  CA   TYR   390      -1.496  19.727  21.111  1.00 18.54
ATOM    2679  CB   TYR   390      -1.422  21.261  21.266  1.00 17.65
ATOM    2680  CG   TYR   390      -1.128  22.020  19.987  1.00 18.84
ATOM    2681  CD1  TYR   390      -2.157  22.468  19.157  1.00 21.00
ATOM    2682  CE1  TYR   390      -1.881  23.124  17.950  1.00 21.33
ATOM    2683  CD2  TYR   390       0.183  22.247  19.585  1.00 19.67
ATOM    2684  CE2  TYR   390       0.471  22.895  18.390  1.00 22.68
ATOM    2685  CZ   TYR   390      -0.566  23.329  17.579  1.00 21.64
ATOM    2686  OH   TYR   390      -0.262  23.963  16.394  1.00 23.80
ATOM    2687  C    TYR   390      -2.790  19.291  20.437  1.00 18.26
ATOM    2688  O    TYR   390      -3.765  20.039  20.376  1.00 18.45
ATOM    2689  N    ALA   391      -2.780  18.050  19.949  1.00 18.00
ATOM    2690  CA   ALA   391      -3.915  17.447  19.253  1.00 17.25
ATOM    2691  CB   ALA   391      -3.497  16.109  18.656  1.00 18.23
ATOM    2692  C    ALA   391      -5.112  17.258  20.177  1.00 17.88
ATOM    2693  O    ALA   391      -6.250  17.147  19.719  1.00 18.08
ATOM    2694  N    THR   392      -4.846  17.195  21.478  1.00 15.74
ATOM    2695  CA   THR   392      -5.901  17.062  22.474  1.00 15.08
ATOM    2696  CB   THR   392      -6.124  15.605  22.917  1.00 17.15
ATOM    2697  OG1  THR   392      -4.980  15.146  23.645  1.00 17.01
ATOM    2698  CG2  THR   392      -6.350  14.704  21.713  1.00 18.95
ATOM    2699  C    THR   392      -5.445  17.857  23.682  1.00 14.74
ATOM    2700  O    THR   392      -4.252  18.072  23.866  1.00 15.11
ATOM    2701  N    PRO   393      -6.389  18.315  24.515  1.00 13.96
ATOM    2702  CD   PRO   393      -7.851  18.291  24.353  1.00 15.31
ATOM    2703  CA   PRO   393      -6.010  19.090  25.698  1.00 16.25
ATOM    2704  CB   PRO   393      -7.349  19.309  26.398  1.00 15.99
ATOM    2705  CG   PRO   393      -8.296  19.436  25.243  1.00 14.27
ATOM    2706  C    PRO   393      -5.016  18.320  26.550  1.00 16.25
ATOM    2707  O    PRO   393      -3.983  18.855  26.964  1.00 16.74
ATOM    2708  N    GLU   394      -5.323  17.049  26.781  1.00 17.06
ATOM    2709  CA   GLU   394      -4.474  16.188  27.586  1.00 18.79
ATOM    2710  CB   GLU   394      -5.044  14.771  27.591  1.00 22.17
ATOM    2711  CG   GLU   394      -4.455  13.860  28.630  1.00 29.13
ATOM    2712  CD   GLU   394      -5.105  12.495  28.613  1.00 33.05
ATOM    2713  OE1  GLU   394      -4.687  11.644  27.797  1.00 35.69
ATOM    2714  OE2  GLU   394      -6.055  12.288  29.402  1.00 34.53
ATOM    2715  C    GLU   394      -3.029  16.167  27.088  1.00 17.93
ATOM    2716  O    GLU   394      -2.092  16.296  27.878  1.00 17.60
ATOM    2717  N    GLN   395      -2.832  16.002  25.783  1.00 16.16
ATOM    2718  CA   GLN   395      -1.469  15.973  25.261  1.00 18.13
ATOM    2719  CB   GLN   395      -1.451  15.465  23.819  1.00 19.78
ATOM    2720  CG   GLN   395      -1.662  13.958  23.738  1.00 26.51
ATOM    2721  CD   GLN   395      -1.756  13.447  22.320  1.00 27.20
ATOM    2722  OE1  GLN   395      -0.821  13.590  21.535  1.00 31.74
ATOM    2723  NE2  GLN   395      -2.889  12.836  21.986  1.00 31.16
```

```
ATOM    2724  C    GLN    395    -0.812  17.342  25.348  1.00 16.31
ATOM    2725  O    GLN    395     0.394  17.448  25.560  1.00 15.19
ATOM    2726  N    ALA    396    -1.611  18.389  25.172  1.00 15.71
ATOM    2727  CA   ALA    396    -1.097  19.748  25.258  1.00 15.45
ATOM    2728  CB   ALA    396    -2.203  20.754  24.941  1.00 14.95
ATOM    2729  C    ALA    396    -0.552  19.995  26.665  1.00 15.89
ATOM    2730  O    ALA    396     0.535  20.548  26.832  1.00 15.31
ATOM    2731  N    PHE    397    -1.306  19.581  27.679  1.00 17.14
ATOM    2732  CA   PHE    397    -0.862  19.780  29.059  1.00 17.67
ATOM    2733  CB   PHE    397    -1.855  19.179  30.062  1.00 17.74
ATOM    2734  CG   PHE    397    -3.276  19.626  29.876  1.00 15.92
ATOM    2735  CD1  PHE    397    -3.571  20.887  29.368  1.00 17.98
ATOM    2736  CD2  PHE    397    -4.325  18.787  30.242  1.00 18.15
ATOM    2737  CE1  PHE    397    -4.891  21.311  29.222  1.00 20.21
ATOM    2738  CE2  PHE    397    -5.650  19.197  30.103  1.00 19.30
ATOM    2739  CZ   PHE    397    -5.934  20.465  29.591  1.00 20.13
ATOM    2740  C    PHE    397     0.496  19.120  29.277  1.00 17.87
ATOM    2741  O    PHE    397     1.397  19.710  29.867  1.00 18.64
ATOM    2742  N    GLU    398     0.628  17.887  28.793  1.00 18.39
ATOM    2743  CA   GLU    398     1.853  17.109  28.942  1.00 19.60
ATOM    2744  CB   GLU    398     1.612  15.691  28.411  1.00 22.86
ATOM    2745  CG   GLU    398     2.689  14.663  28.722  1.00 27.33
ATOM    2746  CD   GLU    398     2.800  14.340  30.203  1.00 31.00
ATOM    2747  OE1  GLU    398     1.840  14.603  30.958  1.00 32.52
ATOM    2748  OE2  GLU    398     3.854  13.804  30.606  1.00 34.89
ATOM    2749  C    GLU    398     3.047  17.740  28.224  1.00 17.86
ATOM    2750  O    GLU    398     4.139  17.864  28.791  1.00 17.51
ATOM    2751  N    ASN    399     2.836  18.143  26.977  1.00 17.52
ATOM    2752  CA   ASN    399     3.903  18.750  26.184  1.00 17.00
ATOM    2753  CB   ASN    399     3.545  18.695  24.696  1.00 17.91
ATOM    2754  CG   ASN    399     3.554  17.274  24.171  1.00 17.94
ATOM    2755  OD1  ASN    399     4.421  16.482  24.557  1.00 16.74
ATOM    2756  ND2  ASN    399     2.614  16.939  23.297  1.00 14.86
ATOM    2757  C    ASN    399     4.248  20.174  26.598  1.00 16.90
ATOM    2758  O    ASN    399     5.426  20.560  26.582  1.00 14.68
ATOM    2759  N    ALA    400     3.231  20.958  26.953  1.00 17.41
ATOM    2760  CA   ALA    400     3.465  22.324  27.403  1.00 17.58
ATOM    2761  CB   ALA    400     2.136  23.038  27.668  1.00 17.90
ATOM    2762  C    ALA    400     4.272  22.249  28.694  1.00 17.52
ATOM    2763  O    ALA    400     5.199  23.028  28.902  1.00 18.40
ATOM    2764  N    ALA    401     3.925  21.298  29.558  1.00 18.00
ATOM    2765  CA   ALA    401     4.629  21.152  30.825  1.00 17.86
ATOM    2766  CB   ALA    401     3.953  20.085  31.698  1.00 17.24
ATOM    2767  C    ALA    401     6.087  20.800  30.599  1.00 17.50
ATOM    2768  O    ALA    401     6.966  21.243  31.341  1.00 17.32
ATOM    2769  N    THR    402     6.349  20.004  29.569  1.00 17.75
ATOM    2770  CA   THR    402     7.714  19.604  29.259  1.00 17.20
ATOM    2771  CB   THR    402     7.744  18.579  28.100  1.00 17.19
ATOM    2772  OG1  THR    402     7.194  17.332  28.551  1.00 15.26
ATOM    2773  CG2  THR    402     9.169  18.361  27.621  1.00 17.10
ATOM    2774  C    THR    402     8.576  20.807  28.883  1.00 18.60
ATOM    2775  O    THR    402     9.690  20.954  29.380  1.00 18.32
ATOM    2776  N    VAL    403     8.063  21.675  28.016  1.00 18.13
ATOM    2777  CA   VAL    403     8.845  22.830  27.603  1.00 19.86
ATOM    2778  CB   VAL    403     8.313  23.416  26.275  1.00 20.58
ATOM    2779  CG1  VAL    403     9.411  24.207  25.600  1.00 25.39
ATOM    2780  CG2  VAL    403     7.857  22.290  25.344  1.00 22.84
ATOM    2781  C    VAL    403     8.886  23.901  28.702  1.00 21.59
ATOM    2782  O    VAL    403     9.825  24.701  28.769  1.00 21.71
ATOM    2783  N    MET    404     7.870  23.909  29.563  1.00 21.27
ATOM    2784  CA   MET    404     7.819  24.849  30.682  1.00 23.55
ATOM    2785  CB   MET    404     6.442  24.813  31.354  1.00 26.11
ATOM    2786  CG   MET    404     5.312  25.363  30.498  1.00 30.04
ATOM    2787  SD   MET    404     5.514  27.112  30.150  1.00 34.43
ATOM    2788  CE   MET    404     4.846  27.830  31.675  1.00 33.59
ATOM    2789  C    MET    404     8.902  24.474  31.704  1.00 22.56
ATOM    2790  O    MET    404     9.649  25.335  32.168  1.00 23.06
ATOM    2791  N    ARG    405     8.988  23.190  32.053  1.00 20.96
ATOM    2792  CA   ARG    405     9.998  22.739  33.008  1.00 21.29
ATOM    2793  CB   ARG    405     9.816  21.254  33.365  1.00 19.72
ATOM    2794  CG   ARG    405     8.471  20.900  33.973  1.00 19.05
ATOM    2795  CD   ARG    405     8.506  19.570  34.721  1.00 18.65
ATOM    2796  NE   ARG    405     7.157  19.145  35.096  1.00 22.57
ATOM    2797  CZ   ARG    405     6.330  18.474  34.299  1.00 21.33
ATOM    2798  NH1  ARG    405     6.717  18.130  33.075  1.00 23.18
ATOM    2799  NH2  ARG    405     5.101  18.180  34.709  1.00 20.27
ATOM    2800  C    ARG    405    11.395  22.948  32.419  1.00 21.30
```

ATOM	2801	O	ARG	405	12.385	23.004	33.144	1.00	20.18
ATOM	2802	N	ALA	406	11.465	23.068	31.097	1.00	21.02
ATOM	2803	CA	ALA	406	12.734	23.272	30.421	1.00	21.90
ATOM	2804	CB	ALA	406	12.625	22.844	28.961	1.00	22.53
ATOM	2805	C	ALA	406	13.188	24.730	30.511	1.00	24.17
ATOM	2806	O	ALA	406	14.331	25.050	30.182	1.00	24.00
ATOM	2807	N	GLY	407	12.298	25.616	30.950	1.00	24.29
ATOM	2808	CA	GLY	407	12.671	27.017	31.083	1.00	27.67
ATOM	2809	C	GLY	407	11.739	28.021	30.429	1.00	27.96
ATOM	2810	O	GLY	407	11.841	29.225	30.672	1.00	27.55
ATOM	2811	N	ALA	408	10.827	27.536	29.595	1.00	28.22
ATOM	2812	CA	ALA	408	9.892	28.423	28.920	1.00	27.88
ATOM	2813	CB	ALA	408	9.114	27.654	27.861	1.00	29.62
ATOM	2814	C	ALA	408	8.928	29.058	29.915	1.00	28.28
ATOM	2815	O	ALA	408	8.602	28.462	30.944	1.00	27.83
ATOM	2816	N	ASN	409	8.480	30.271	29.602	1.00	27.03
ATOM	2817	CA	ASN	409	7.539	30.996	30.454	1.00	27.18
ATOM	2818	CB	ASN	409	7.971	32.453	30.632	1.00	29.08
ATOM	2819	CG	ASN	409	9.327	32.590	31.274	1.00	28.79
ATOM	2820	OD1	ASN	409	9.552	32.124	32.394	1.00	28.82
ATOM	2821	ND2	ASN	409	10.245	33.244	30.571	1.00	27.34
ATOM	2822	C	ASN	409	6.156	30.993	29.823	1.00	26.67
ATOM	2823	O	ASN	409	5.150	31.201	30.501	1.00	25.46
ATOM	2824	N	MET	410	6.114	30.767	28.515	1.00	24.91
ATOM	2825	CA	MET	410	4.853	30.758	27.781	1.00	24.64
ATOM	2826	CB	MET	410	4.549	32.173	27.279	1.00	26.21
ATOM	2827	CG	MET	410	3.244	32.339	26.516	1.00	28.39
ATOM	2828	SD	MET	410	3.036	34.056	25.925	1.00	30.91
ATOM	2829	CE	MET	410	1.737	34.676	27.032	1.00	31.25
ATOM	2830	C	MET	410	4.947	29.794	26.605	1.00	23.26
ATOM	2831	O	MET	410	6.039	29.499	26.125	1.00	21.44
ATOM	2832	N	VAL	411	3.796	29.313	26.151	1.00	22.20
ATOM	2833	CA	VAL	411	3.726	28.381	25.035	1.00	24.32
ATOM	2834	CB	VAL	411	3.045	27.060	25.482	1.00	25.61
ATOM	2835	CG1	VAL	411	2.625	26.248	24.281	1.00	30.37
ATOM	2836	CG2	VAL	411	3.998	26.257	26.354	1.00	25.91
ATOM	2837	C	VAL	411	2.930	28.978	23.875	1.00	23.06
ATOM	2838	O	VAL	411	1.933	29.670	24.087	1.00	23.99
ATOM	2839	N	LYS	412	3.372	28.714	22.649	1.00	22.84
ATOM	2840	CA	LYS	412	2.674	29.220	21.471	1.00	22.52
ATOM	2841	CB	LYS	412	3.616	30.080	20.611	1.00	22.89
ATOM	2842	CG	LYS	412	2.927	30.727	19.405	1.00	23.26
ATOM	2843	CD	LYS	412	3.725	31.898	18.838	1.00	22.53
ATOM	2844	CE	LYS	412	4.979	31.436	18.103	1.00	22.01
ATOM	2845	NZ	LYS	412	4.638	30.645	16.892	1.00	20.94
ATOM	2846	C	LYS	412	2.129	28.056	20.649	1.00	23.26
ATOM	2847	O	LYS	412	2.830	27.071	20.406	1.00	22.79
ATOM	2848	N	ILE	413	0.870	28.170	20.240	1.00	23.60
ATOM	2849	CA	ILE	413	0.212	27.138	19.437	1.00	26.66
ATOM	2850	CB	ILE	413	-0.758	26.291	20.295	1.00	26.12
ATOM	2851	CG2	ILE	413	0.028	25.460	21.299	1.00	26.91
ATOM	2852	CG1	ILE	413	-1.751	27.203	21.020	1.00	28.28
ATOM	2853	CD1	ILE	413	-2.796	26.446	21.830	1.00	24.14
ATOM	2854	C	ILE	413	-0.580	27.747	18.282	1.00	27.66
ATOM	2855	O	ILE	413	-1.152	28.829	18.414	1.00	28.22
ATOM	2856	N	GLU	414	-0.615	27.037	17.158	1.00	29.05
ATOM	2857	CA	GLU	414	-1.318	27.489	15.958	1.00	30.52
ATOM	2858	CB	GLU	414	-0.569	27.025	14.707	1.00	31.51
ATOM	2859	CG	GLU	414	0.834	27.574	14.561	1.00	32.37
ATOM	2860	CD	GLU	414	1.593	26.923	13.416	1.00	33.72
ATOM	2861	OE1	GLU	414	0.951	26.261	12.568	1.00	32.40
ATOM	2862	OE2	GLU	414	2.832	27.082	13.356	1.00	32.46
ATOM	2863	C	GLU	414	-2.743	26.961	15.887	1.00	32.06
ATOM	2864	O	GLU	414	-2.997	25.800	16.201	1.00	33.94
ATOM	2865	N	GLY	415	-3.672	27.809	15.458	1.00	32.73
ATOM	2866	CA	GLY	415	-5.052	27.372	15.345	1.00	33.14
ATOM	2867	C	GLY	415	-6.074	28.431	15.703	1.00	32.54
ATOM	2868	O	GLY	415	-5.744	29.432	16.336	1.00	31.25
ATOM	2869	N	GLY	416	-7.322	28.199	15.302	1.00	33.53
ATOM	2870	CA	GLY	416	-8.386	29.148	15.586	1.00	34.28
ATOM	2871	C	GLY	416	-9.369	28.688	16.650	1.00	35.11
ATOM	2872	O	GLY	416	-8.976	28.275	17.741	1.00	35.72
ATOM	2873	N	GLU	417	-10.656	28.762	16.324	1.00	34.22
ATOM	2874	CA	GLU	417	-11.723	28.370	17.240	1.00	34.97
ATOM	2875	CB	GLU	417	-13.076	28.448	16.527	1.00	38.06
ATOM	2876	CG	GLU	417	-13.709	29.829	16.530	1.00	44.07
ATOM	2877	CD	GLU	417	-14.416	30.149	17.835	1.00	46.62

```
ATOM    2878  OE1 GLU    417    -13.763  30.094  18.900  1.00 48.75
ATOM    2879  OE2 GLU    417    -15.628  30.457  17.793  1.00 48.44
ATOM    2880  C   GLU    417    -11.576  26.986  17.861  1.00 33.06
ATOM    2881  O   GLU    417    -11.974  26.778  19.008  1.00 31.36
ATOM    2882  N   TRP    418    -11.011  26.041  17.115  1.00 31.17
ATOM    2883  CA  TRP    418    -10.865  24.683  17.632  1.00 30.62
ATOM    2884  CB  TRP    418    -10.427  23.710  16.526  1.00 29.57
ATOM    2885  CG  TRP    418     -8.968  23.794  16.161  1.00 27.67
ATOM    2886  CD2 TRP    418     -7.909  22.968  16.666  1.00 27.03
ATOM    2887  CE2 TRP    418     -6.710  23.410  16.063  1.00 25.39
ATOM    2888  CE3 TRP    418     -7.856  21.901  17.575  1.00 25.44
ATOM    2889  CD1 TRP    418     -8.386  24.674  15.297  1.00 27.61
ATOM    2890  NE1 TRP    418     -7.030  24.449  15.231  1.00 25.85
ATOM    2891  CZ2 TRP    418     -5.471  22.817  16.333  1.00 24.66
ATOM    2892  CZ3 TRP    418     -6.618  21.313  17.843  1.00 24.48
ATOM    2893  CH2 TRP    418     -5.446  21.777  17.225  1.00 24.32
ATOM    2894  C   TRP    418     -9.900  24.568  18.810  1.00 29.99
ATOM    2895  O   TRP    418     -9.793  23.500  19.417  1.00 31.23
ATOM    2896  N   LEU    419     -9.208  25.661  19.131  1.00 26.75
ATOM    2897  CA  LEU    419     -8.244  25.677  20.235  1.00 26.72
ATOM    2898  CB  LEU    419     -6.950  26.371  19.809  1.00 25.59
ATOM    2899  CG  LEU    419     -6.010  25.613  18.872  1.00 26.52
ATOM    2900  CD1 LEU    419     -4.746  26.434  18.644  1.00 25.61
ATOM    2901  CD2 LEU    419     -5.659  24.268  19.488  1.00 23.92
ATOM    2902  C   LEU    419     -8.755  26.355  21.498  1.00 26.45
ATOM    2903  O   LEU    419     -8.051  26.412  22.507  1.00 23.45
ATOM    2904  N   VAL    420     -9.976  26.871  21.442  1.00 25.42
ATOM    2905  CA  VAL    420    -10.562  27.544  22.591  1.00 25.27
ATOM    2906  CB  VAL    420    -12.053  27.865  22.340  1.00 25.27
ATOM    2907  CG1 VAL    420    -12.701  28.408  23.619  1.00 25.70
ATOM    2908  CG2 VAL    420    -12.171  28.891  21.220  1.00 25.05
ATOM    2909  C   VAL    420    -10.434  26.701  23.857  1.00 24.44
ATOM    2910  O   VAL    420     -9.785  27.109  24.819  1.00 24.50
ATOM    2911  N   GLU    421    -11.041  25.520  23.842  1.00 23.25
ATOM    2912  CA  GLU    421    -11.000  24.635  24.999  1.00 23.68
ATOM    2913  CB  GLU    421    -11.659  23.301  24.654  1.00 26.62
ATOM    2914  CG  GLU    421    -11.745  22.350  25.825  1.00 30.68
ATOM    2915  CD  GLU    421    -12.603  21.141  25.526  1.00 32.30
ATOM    2916  OE1 GLU    421    -12.199  20.308  24.688  1.00 32.73
ATOM    2917  OE2 GLU    421    -13.692  21.036  26.129  1.00 36.59
ATOM    2918  C   GLU    421     -9.576  24.393  25.513  1.00 22.94
ATOM    2919  O   GLU    421     -9.320  24.490  26.711  1.00 21.48
ATOM    2920  N   THR    422     -8.660  24.079  24.602  1.00 21.94
ATOM    2921  CA  THR    422     -7.267  23.827  24.952  1.00 20.34
ATOM    2922  CB  THR    422     -6.456  23.462  23.692  1.00 21.24
ATOM    2923  OG1 THR    422     -7.015  22.283  23.103  1.00 20.48
ATOM    2924  CG2 THR    422     -4.991  23.211  24.032  1.00 19.54
ATOM    2925  C   THR    422     -6.634  25.042  25.625  1.00 21.57
ATOM    2926  O   THR    422     -5.871  24.916  26.591  1.00 20.08
ATOM    2927  N   VAL    423     -6.951  26.224  25.109  1.00 22.38
ATOM    2928  CA  VAL    423     -6.420  27.453  25.675  1.00 23.54
ATOM    2929  CB  VAL    423     -6.755  28.672  24.794  1.00 24.18
ATOM    2930  CG1 VAL    423     -6.307  29.955  25.497  1.00 24.10
ATOM    2931  CG2 VAL    423     -6.064  28.540  23.455  1.00 22.31
ATOM    2932  C   VAL    423     -6.973  27.699  27.074  1.00 24.57
ATOM    2933  O   VAL    423     -6.221  28.014  27.994  1.00 24.45
ATOM    2934  N   GLN    424     -8.286  27.554  27.231  1.00 24.53
ATOM    2935  CA  GLN    424     -8.910  27.776  28.529  1.00 25.29
ATOM    2936  CB  GLN    424    -10.429  27.587  28.438  1.00 26.08
ATOM    2937  CG  GLN    424    -11.088  28.337  27.289  1.00 29.30
ATOM    2938  CD  GLN    424    -12.604  28.243  27.319  1.00 31.02
ATOM    2939  OE1 GLN    424    -13.171  27.155  27.423  1.00 27.95
ATOM    2940  NE2 GLN    424    -13.269  29.390  27.220  1.00 33.12
ATOM    2941  C   GLN    424     -8.338  26.819  29.568  1.00 25.02
ATOM    2942  O   GLN    424     -7.998  27.225  30.677  1.00 23.19
ATOM    2943  N   MET    425     -8.216  25.549  29.204  1.00 21.87
ATOM    2944  CA  MET    425     -7.703  24.556  30.135  1.00 22.36
ATOM    2945  CB  MET    425     -8.003  23.155  29.609  1.00 22.27
ATOM    2946  CG  MET    425     -9.484  22.889  29.484  1.00 23.95
ATOM    2947  SD  MET    425     -9.848  21.203  29.002  1.00 24.90
ATOM    2948  CE  MET    425     -9.831  20.377  30.583  1.00 28.11
ATOM    2949  C   MET    425     -6.216  24.707  30.448  1.00 20.61
ATOM    2950  O   MET    425     -5.791  24.450  31.571  1.00 20.01
ATOM    2951  N   LEU    426     -5.426  25.122  29.463  1.00 20.23
ATOM    2952  CA  LEU    426     -3.999  25.315  29.685  1.00 20.83
ATOM    2953  CB  LEU    426     -3.291  25.634  28.366  1.00 18.83
ATOM    2954  CG  LEU    426     -2.789  24.412  27.576  1.00 16.82
```

ATOM	2955	CD1	LEU	426	-2.321	24.828	26.188	1.00	18.65
ATOM	2956	CD2	LEU	426	-1.642	23.764	28.344	1.00	18.65
ATOM	2957	C	LEU	426	-3.810	26.465	30.668	1.00	24.13
ATOM	2958	O	LEU	426	-2.952	26.411	31.550	1.00	23.47
ATOM	2959	N	THR	427	-4.631	27.498	30.505	1.00	27.30
ATOM	2960	CA	THR	427	-4.594	28.681	31.357	1.00	31.01
ATOM	2961	CB	THR	427	-5.694	29.685	30.957	1.00	31.69
ATOM	2962	OG1	THR	427	-5.486	30.107	29.605	1.00	34.44
ATOM	2963	CG2	THR	427	-5.665	30.903	31.868	1.00	34.25
ATOM	2964	C	THR	427	-4.774	28.340	32.831	1.00	31.38
ATOM	2965	O	THR	427	-3.902	28.627	33.646	1.00	31.24
ATOM	2966	N	GLU	428	-5.905	27.727	33.172	1.00	32.66
ATOM	2967	CA	GLU	428	-6.168	27.375	34.563	1.00	32.58
ATOM	2968	CB	GLU	428	-7.614	26.899	34.741	1.00	33.84
ATOM	2969	CG	GLU	428	-8.107	25.949	33.673	1.00	34.13
ATOM	2970	CD	GLU	428	-9.482	25.377	33.995	1.00	34.03
ATOM	2971	OE1	GLU	428	-10.368	26.145	34.438	1.00	30.96
ATOM	2972	OE2	GLU	428	-9.673	24.162	33.793	1.00	31.63
ATOM	2973	C	GLU	428	-5.206	26.339	35.134	1.00	32.23
ATOM	2974	O	GLU	428	-5.269	26.022	36.320	1.00	32.97
ATOM	2975	N	ARG	429	-4.314	25.816	34.296	1.00	31.00
ATOM	2976	CA	ARG	429	-3.339	24.831	34.753	1.00	27.80
ATOM	2977	CB	ARG	429	-3.372	23.594	33.844	1.00	26.67
ATOM	2978	CG	ARG	429	-4.594	22.731	34.106	1.00	25.42
ATOM	2979	CD	ARG	429	-4.832	21.643	33.064	1.00	21.31
ATOM	2980	NE	ARG	429	-6.072	20.932	33.372	1.00	20.15
ATOM	2981	CZ	ARG	429	-7.270	21.513	33.413	1.00	19.59
ATOM	2982	NH1	ARG	429	-7.396	22.805	33.157	1.00	19.16
ATOM	2983	NH2	ARG	429	-8.340	20.815	33.736	1.00	18.53
ATOM	2984	C	ARG	429	-1.930	25.423	34.825	1.00	28.16
ATOM	2985	O	ARG	429	-0.934	24.708	34.728	1.00	27.12
ATOM	2986	N	ALA	430	-1.865	26.742	34.990	1.00	29.24
ATOM	2987	CA	ALA	430	-0.600	27.464	35.109	1.00	29.49
ATOM	2988	CB	ALA	430	0.233	26.864	36.237	1.00	29.80
ATOM	2989	C	ALA	430	0.239	27.544	33.834	1.00	29.79
ATOM	2990	O	ALA	430	1.468	27.521	33.900	1.00	30.37
ATOM	2991	N	VAL	431	-0.409	27.641	32.676	1.00	29.07
ATOM	2992	CA	VAL	431	0.332	27.738	31.420	1.00	27.53
ATOM	2993	CB	VAL	431	0.279	26.405	30.623	1.00	27.98
ATOM	2994	CG1	VAL	431	1.073	26.545	29.327	1.00	27.45
ATOM	2995	CG2	VAL	431	0.848	25.274	31.457	1.00	25.30
ATOM	2996	C	VAL	431	-0.175	28.866	30.522	1.00	27.45
ATOM	2997	O	VAL	431	-1.231	28.750	29.894	1.00	27.25
ATOM	2998	N	PRO	432	0.570	29.986	30.460	1.00	26.79
ATOM	2999	CD	PRO	432	1.831	30.287	31.155	1.00	26.11
ATOM	3000	CA	PRO	432	0.159	31.115	29.617	1.00	26.19
ATOM	3001	CB	PRO	432	1.135	32.218	30.017	1.00	27.09
ATOM	3002	CG	PRO	432	2.360	31.452	30.362	1.00	29.57
ATOM	3003	C	PRO	432	0.285	30.715	28.152	1.00	24.89
ATOM	3004	O	PRO	432	1.205	29.987	27.775	1.00	24.44
ATOM	3005	N	VAL	433	-0.642	31.192	27.333	1.00	23.55
ATOM	3006	CA	VAL	433	-0.653	30.841	25.924	1.00	22.49
ATOM	3007	CB	VAL	433	-1.895	29.990	25.592	1.00	20.80
ATOM	3008	CG1	VAL	433	-1.915	29.640	24.111	1.00	21.86
ATOM	3009	CG2	VAL	433	-1.896	28.726	26.449	1.00	19.73
ATOM	3010	C	VAL	433	-0.633	32.030	24.980	1.00	24.12
ATOM	3011	O	VAL	433	-1.244	33.068	25.244	1.00	22.28
ATOM	3012	N	CYS	434	0.091	31.850	23.880	1.00	25.46
ATOM	3013	CA	CYS	434	0.206	32.841	22.820	1.00	26.20
ATOM	3014	CB	CYS	434	1.675	33.159	22.543	1.00	27.30
ATOM	3015	SG	CYS	434	1.936	34.229	21.110	1.00	29.19
ATOM	3016	C	CYS	434	-0.416	32.197	21.585	1.00	27.10
ATOM	3017	O	CYS	434	0.010	31.123	21.165	1.00	27.48
ATOM	3018	N	GLY	435	-1.428	32.842	21.019	1.00	25.59
ATOM	3019	CA	GLY	435	-2.078	32.298	19.842	1.00	27.29
ATOM	3020	C	GLY	435	-1.269	32.541	18.586	1.00	27.32
ATOM	3021	O	GLY	435	-0.237	33.211	18.629	1.00	26.82
ATOM	3022	N	HIS	436	-1.737	32.005	17.463	1.00	27.79
ATOM	3023	CA	HIS	436	-1.037	32.164	16.195	1.00	28.13
ATOM	3024	CB	HIS	436	0.117	31.158	16.128	1.00	28.29
ATOM	3025	CG	HIS	436	1.044	31.362	14.970	1.00	29.67
ATOM	3026	CD2	HIS	436	0.893	32.043	13.809	1.00	28.18
ATOM	3027	ND1	HIS	436	2.298	30.792	14.918	1.00	28.22
ATOM	3028	CE1	HIS	436	2.878	31.110	13.775	1.00	29.12
ATOM	3029	NE2	HIS	436	2.046	31.868	13.083	1.00	27.13
ATOM	3030	C	HIS	436	-2.008	31.950	15.039	1.00	29.59
ATOM	3031	O	HIS	436	-2.356	30.817	14.708	1.00	27.47

```
ATOM   3032  N    LEU   437    -2.442  33.052  14.428  1.00 30.59
ATOM   3033  CA   LEU   437    -3.384  32.999  13.314  1.00 31.59
ATOM   3034  CB   LEU   437    -4.632  33.823  13.643  1.00 31.44
ATOM   3035  CG   LEU   437    -5.519  33.332  14.790  1.00 30.60
ATOM   3036  CD1  LEU   437    -6.611  34.351  15.065  1.00 30.46
ATOM   3037  CD2  LEU   437    -6.124  31.978  14.429  1.00 30.85
ATOM   3038  C    LEU   437    -2.771  33.507  12.015  1.00 32.51
ATOM   3039  O    LEU   437    -1.758  34.204  12.024  1.00 32.44
ATOM   3040  N    GLY   438    -3.399  33.154  10.898  1.00 34.06
ATOM   3041  CA   GLY   438    -2.905  33.587   9.606  1.00 35.62
ATOM   3042  C    GLY   438    -2.283  32.452   8.825  1.00 37.37
ATOM   3043  O    GLY   438    -2.896  31.400   8.641  1.00 37.17
ATOM   3044  N    LEU   439    -1.055  32.659   8.366  1.00 38.61
ATOM   3045  CA   LEU   439    -0.355  31.642   7.601  1.00 39.93
ATOM   3046  CB   LEU   439     0.623  32.310   6.630  1.00 42.55
ATOM   3047  CG   LEU   439     1.104  31.510   5.414  1.00 44.13
ATOM   3048  CD1  LEU   439     1.964  32.410   4.533  1.00 45.83
ATOM   3049  CD2  LEU   439     1.889  30.288   5.858  1.00 43.74
ATOM   3050  C    LEU   439     0.388  30.719   8.567  1.00 40.30
ATOM   3051  O    LEU   439     1.549  30.957   8.902  1.00 40.50
ATOM   3052  N    THR   440    -0.302  29.675   9.020  1.00 39.46
ATOM   3053  CA   THR   440     0.267  28.700   9.947  1.00 38.93
ATOM   3054  CB   THR   440    -0.847  27.967  10.717  1.00 39.18
ATOM   3055  OG1  THR   440    -1.763  27.374   9.787  1.00 38.96
ATOM   3056  CG2  THR   440    -1.600  28.938  11.612  1.00 37.57
ATOM   3057  C    THR   440     1.108  27.677   9.181  1.00 38.59
ATOM   3058  O    THR   440     0.572  26.785   8.522  1.00 38.96
ATOM   3059  N    PRO   441     2.444  27.791   9.270  1.00 37.45
ATOM   3060  CD   PRO   441     3.166  28.736  10.142  1.00 37.29
ATOM   3061  CA   PRO   441     3.378  26.891   8.586  1.00 36.21
ATOM   3062  CB   PRO   441     4.747  27.433   8.998  1.00 36.37
ATOM   3063  CG   PRO   441     4.485  28.045  10.332  1.00 39.17
ATOM   3064  C    PRO   441     3.205  25.400   8.882  1.00 34.87
ATOM   3065  O    PRO   441     3.548  24.558   8.050  1.00 33.70
ATOM   3066  N    GLN   442     2.677  25.069  10.058  1.00 33.93
ATOM   3067  CA   GLN   442     2.453  23.668  10.406  1.00 32.20
ATOM   3068  CB   GLN   442     1.991  23.542  11.863  1.00 31.74
ATOM   3069  CG   GLN   442     3.122  23.343  12.873  1.00 29.51
ATOM   3070  CD   GLN   442     2.644  23.472  14.312  1.00 29.21
ATOM   3071  OE1  GLN   442     1.579  22.972  14.670  1.00 27.25
ATOM   3072  NE2  GLN   442     3.436  24.136  15.145  1.00 28.44
ATOM   3073  C    GLN   442     1.406  23.052   9.472  1.00 31.45
ATOM   3074  O    GLN   442     1.423  21.848   9.215  1.00 30.71
ATOM   3075  N    SER   443     0.500  23.885   8.965  1.00 30.60
ATOM   3076  CA   SER   443    -0.546  23.420   8.058  1.00 31.30
ATOM   3077  CB   SER   443    -1.881  24.089   8.394  1.00 31.62
ATOM   3078  OG   SER   443    -2.343  23.707   9.680  1.00 32.96
ATOM   3079  C    SER   443    -0.188  23.711   6.603  1.00 30.60
ATOM   3080  O    SER   443    -1.070  23.829   5.751  1.00 29.98
ATOM   3081  N    VAL   444     1.109  23.818   6.323  1.00 29.83
ATOM   3082  CA   VAL   444     1.590  24.101   4.970  1.00 29.28
ATOM   3083  CB   VAL   444     3.143  24.079   4.909  1.00 30.47
ATOM   3084  CG1  VAL   444     3.670  22.706   5.307  1.00 28.85
ATOM   3085  CG2  VAL   444     3.616  24.440   3.504  1.00 30.63
ATOM   3086  C    VAL   444     1.039  23.101   3.952  1.00 30.00
ATOM   3087  O    VAL   444     0.718  23.466   2.819  1.00 30.16
ATOM   3088  N    ASN   445     0.925  21.842   4.361  1.00 28.62
ATOM   3089  CA   ASN   445     0.412  20.804   3.478  1.00 27.90
ATOM   3090  CB   ASN   445     0.666  19.425   4.089  1.00 26.96
ATOM   3091  CG   ASN   445     2.141  19.128   4.245  1.00 28.30
ATOM   3092  OD1  ASN   445     2.868  19.009   3.257  1.00 30.31
ATOM   3093  ND2  ASN   445     2.598  19.023   5.488  1.00 28.01
ATOM   3094  C    ASN   445    -1.073  20.991   3.203  1.00 27.73
ATOM   3095  O    ASN   445    -1.575  20.566   2.165  1.00 25.69
ATOM   3096  N    ILE   446    -1.767  21.632   4.138  1.00 29.28
ATOM   3097  CA   ILE   446    -3.196  21.890   3.993  1.00 31.96
ATOM   3098  CB   ILE   446    -3.836  22.319   5.335  1.00 31.98
ATOM   3099  CG2  ILE   446    -5.264  22.799   5.105  1.00 31.16
ATOM   3100  CG1  ILE   446    -3.814  21.153   6.331  1.00 30.13
ATOM   3101  CD1  ILE   446    -4.670  19.979   5.928  1.00 31.79
ATOM   3102  C    ILE   446    -3.411  23.007   2.982  1.00 34.41
ATOM   3103  O    ILE   446    -4.239  22.889   2.080  1.00 33.82
ATOM   3104  N    PHE   447    -2.657  24.092   3.142  1.00 36.64
ATOM   3105  CA   PHE   447    -2.763  25.245   2.249  1.00 39.97
ATOM   3106  CB   PHE   447    -2.040  26.452   2.852  1.00 39.70
ATOM   3107  CG   PHE   447    -2.516  26.826   4.228  1.00 40.98
ATOM   3108  CD1  PHE   447    -3.860  27.100   4.467  1.00 41.63
```

```
ATOM   3109  CD2 PHE    447     -1.613  26.931   5.282  1.00 41.49
ATOM   3110  CE1 PHE    447     -4.299  27.474   5.738  1.00 41.71
ATOM   3111  CE2 PHE    447     -2.040  27.304   6.557  1.00 41.93
ATOM   3112  CZ  PHE    447     -3.388  27.577   6.785  1.00 41.96
ATOM   3113  C   PHE    447     -2.170  24.948   0.874  1.00 42.08
ATOM   3114  O   PHE    447     -2.536  25.579  -0.121  1.00 42.68
ATOM   3115  N   GLY    448     -1.251  23.987   0.831  1.00 43.71
ATOM   3116  CA  GLY    448     -0.608  23.622  -0.418  1.00 45.97
ATOM   3117  C   GLY    448      0.576  24.528  -0.695  1.00 47.94
ATOM   3118  O   GLY    448      0.963  24.729  -1.846  1.00 48.22
ATOM   3119  N   GLY    449      1.150  25.076   0.371  1.00 49.19
ATOM   3120  CA  GLY    449      2.285  25.969   0.239  1.00 50.57
ATOM   3121  C   GLY    449      2.149  27.142   1.191  1.00 51.89
ATOM   3122  O   GLY    449      1.263  27.148   2.047  1.00 51.79
ATOM   3123  N   TYR    450      3.020  28.137   1.048  1.00 53.06
ATOM   3124  CA  TYR    450      2.970  29.311   1.912  1.00 54.66
ATOM   3125  CB  TYR    450      4.375  29.674   2.397  1.00 54.86
ATOM   3126  CG  TYR    450      5.085  28.537   3.093  1.00 55.77
ATOM   3127  CD1 TYR    450      5.758  27.559   2.362  1.00 55.77
ATOM   3128  CE1 TYR    450      6.387  26.490   2.996  1.00 56.62
ATOM   3129  CD2 TYR    450      5.057  28.420   4.482  1.00 55.92
ATOM   3130  CE2 TYR    450      5.681  27.354   5.128  1.00 56.38
ATOM   3131  CZ  TYR    450      6.344  26.392   4.378  1.00 56.70
ATOM   3132  OH  TYR    450      6.958  25.329   5.008  1.00 56.18
ATOM   3133  C   TYR    450      2.346  30.493   1.178  1.00 55.36
ATOM   3134  O   TYR    450      3.036  31.265   0.513  1.00 55.48
ATOM   3135  N   LYS    451      1.031  30.625   1.311  1.00 56.14
ATOM   3136  CA  LYS    451      0.291  31.695   0.659  1.00 56.56
ATOM   3137  CB  LYS    451     -0.833  31.099  -0.189  1.00 57.29
ATOM   3138  CG  LYS    451     -0.410  29.887  -1.008  1.00 57.70
ATOM   3139  CD  LYS    451     -1.613  29.188  -1.621  1.00 58.82
ATOM   3140  CE  LYS    451     -1.232  27.840  -2.215  1.00 58.93
ATOM   3141  NZ  LYS    451     -2.426  27.115  -2.731  1.00 58.99
ATOM   3142  C   LYS    451     -0.296  32.626   1.714  1.00 56.60
ATOM   3143  O   LYS    451     -0.542  32.216   2.849  1.00 56.17
ATOM   3144  N   VAL    452     -0.521  33.879   1.333  1.00 56.36
ATOM   3145  CA  VAL    452     -1.079  34.868   2.245  1.00 56.35
ATOM   3146  CB  VAL    452     -0.945  36.297   1.667  1.00 56.62
ATOM   3147  CG1 VAL    452     -1.394  37.322   2.696  1.00 56.98
ATOM   3148  CG2 VAL    452      0.491  36.553   1.247  1.00 56.04
ATOM   3149  C   VAL    452     -2.557  34.591   2.514  1.00 56.29
ATOM   3150  O   VAL    452     -3.383  34.631   1.600  1.00 56.01
ATOM   3151  N   GLN    453     -2.880  34.304   3.772  1.00 56.06
ATOM   3152  CA  GLN    453     -4.258  34.036   4.166  1.00 56.41
ATOM   3153  CB  GLN    453     -4.303  33.044   5.334  1.00 56.31
ATOM   3154  CG  GLN    453     -4.304  31.574   4.926  1.00 56.61
ATOM   3155  CD  GLN    453     -3.011  31.138   4.268  1.00 57.19
ATOM   3156  OE1 GLN    453     -1.934  31.255   4.854  1.00 57.65
ATOM   3157  NE2 GLN    453     -3.111  30.624   3.048  1.00 55.74
ATOM   3158  C   GLN    453     -4.965  35.327   4.565  1.00 56.38
ATOM   3159  O   GLN    453     -4.333  36.375   4.704  1.00 55.54
ATOM   3160  N   GLY    454     -6.281  35.244   4.746  1.00 56.76
ATOM   3161  CA  GLY    454     -7.053  36.413   5.127  1.00 57.88
ATOM   3162  C   GLY    454     -7.627  37.165   3.940  1.00 58.46
ATOM   3163  O   GLY    454     -8.382  38.120   4.115  1.00 58.43
ATOM   3164  N   ARG    455     -7.267  36.735   2.733  1.00 59.53
ATOM   3165  CA  ARG    455     -7.750  37.371   1.509  1.00 61.02
ATOM   3166  CB  ARG    455     -7.081  36.737   0.283  1.00 61.22
ATOM   3167  CG  ARG    455     -5.603  37.080   0.120  1.00 61.34
ATOM   3168  CD  ARG    455     -5.416  38.532  -0.305  1.00 61.58
ATOM   3169  NE  ARG    455     -4.023  38.979  -0.232  1.00 61.55
ATOM   3170  CZ  ARG    455     -3.013  38.444  -0.914  1.00 60.83
ATOM   3171  NH1 ARG    455     -3.224  37.425  -1.736  1.00 60.33
ATOM   3172  NH2 ARG    455     -1.788  38.935  -0.778  1.00 60.86
ATOM   3173  C   ARG    455     -9.268  37.252   1.387  1.00 61.98
ATOM   3174  O   ARG    455     -9.805  36.157   1.214  1.00 61.66
ATOM   3175  N   GLY    456     -9.955  38.387   1.482  1.00 62.93
ATOM   3176  CA  GLY    456    -11.402  38.386   1.379  1.00 64.13
ATOM   3177  C   GLY    456    -12.084  38.769   2.678  1.00 65.08
ATOM   3178  O   GLY    456    -11.445  38.843   3.728  1.00 65.12
ATOM   3179  N   ASP    457    -13.388  39.016   2.606  1.00 65.45
ATOM   3180  CA  ASP    457    -14.162  39.392   3.783  1.00 65.79
ATOM   3181  CB  ASP    457    -15.457  40.094   3.365  1.00 66.87
ATOM   3182  CG  ASP    457    -15.205  41.358   2.565  1.00 67.41
ATOM   3183  OD1 ASP    457    -14.544  42.277   3.095  1.00 67.49
ATOM   3184  OD2 ASP    457    -15.668  41.432   1.407  1.00 68.24
ATOM   3185  C   ASP    457    -14.494  38.159   4.616  1.00 65.50
```

```
ATOM   3186  O    ASP  457    -14.485  38.208   5.846  1.00 65.44
ATOM   3187  N    GLU  458    -14.788  37.055   3.936  1.00 65.17
ATOM   3188  CA   GLU  458    -15.122  35.808   4.611  1.00 64.76
ATOM   3189  CB   GLU  458    -15.460  34.726   3.583  1.00 65.72
ATOM   3190  CG   GLU  458    -15.856  33.392   4.194  1.00 67.79
ATOM   3191  CD   GLU  458    -16.235  32.360   3.149  1.00 68.91
ATOM   3192  OE1  GLU  458    -17.201  32.605   2.394  1.00 69.70
ATOM   3193  OE2  GLU  458    -15.568  31.305   3.083  1.00 69.17
ATOM   3194  C    GLU  458    -13.956  35.348   5.480  1.00 63.98
ATOM   3195  O    GLU  458    -14.115  35.121   6.681  1.00 63.71
ATOM   3196  N    ALA  459    -12.785  35.213   4.866  1.00 62.74
ATOM   3197  CA   ALA  459    -11.588  34.787   5.581  1.00 61.25
ATOM   3198  CB   ALA  459    -10.462  34.507   4.594  1.00 61.27
ATOM   3199  C    ALA  459    -11.159  35.863   6.575  1.00 60.06
ATOM   3200  O    ALA  459    -10.630  35.560   7.645  1.00 59.75
ATOM   3201  N    GLY  460    -11.392  37.119   6.212  1.00 58.46
ATOM   3202  CA   GLY  460    -11.029  38.218   7.083  1.00 57.13
ATOM   3203  C    GLY  460    -11.808  38.207   8.384  1.00 56.78
ATOM   3204  O    GLY  460    -11.220  38.275   9.463  1.00 56.93
ATOM   3205  N    ASP  461    -13.132  38.118   8.290  1.00 55.32
ATOM   3206  CA   ASP  461    -13.974  38.101   9.481  1.00 54.77
ATOM   3207  CB   ASP  461    -15.455  38.211   9.099  1.00 55.32
ATOM   3208  CG   ASP  461    -15.783  39.512   8.386  1.00 56.16
ATOM   3209  OD1  ASP  461    -15.440  40.593   8.913  1.00 56.40
ATOM   3210  OD2  ASP  461    -16.395  39.452   7.301  1.00 56.69
ATOM   3211  C    ASP  461    -13.753  36.825  10.287  1.00 53.74
ATOM   3212  O    ASP  461    -13.998  36.792  11.491  1.00 53.31
ATOM   3213  N    GLN  462    -13.290  35.776   9.614  1.00 53.09
ATOM   3214  CA   GLN  462    -13.034  34.500  10.268  1.00 52.15
ATOM   3215  CB   GLN  462    -12.908  33.387   9.228  1.00 51.74
ATOM   3216  CG   GLN  462    -12.684  32.009   9.826  1.00 51.57
ATOM   3217  CD   GLN  462    -13.729  31.655  10.865  1.00 52.18
ATOM   3218  OE1  GLN  462    -14.930  31.725  10.604  1.00 51.90
ATOM   3219  NE2  GLN  462    -13.275  31.268  12.053  1.00 52.39
ATOM   3220  C    GLN  462    -11.767  34.567  11.108  1.00 51.68
ATOM   3221  O    GLN  462    -11.647  33.878  12.121  1.00 52.10
ATOM   3222  N    LEU  463    -10.819  35.397  10.686  1.00 51.14
ATOM   3223  CA   LEU  463     -9.567  35.552  11.419  1.00 50.31
ATOM   3224  CB   LEU  463     -8.478  36.116  10.507  1.00 51.43
ATOM   3225  CG   LEU  463     -8.036  35.227   9.343  1.00 52.52
ATOM   3226  CD1  LEU  463     -6.962  35.949   8.542  1.00 53.49
ATOM   3227  CD2  LEU  463     -7.505  33.901   9.872  1.00 53.21
ATOM   3228  C    LEU  463     -9.769  36.480  12.603  1.00 49.29
ATOM   3229  O    LEU  463     -9.162  36.295  13.656  1.00 49.00
ATOM   3230  N    LEU  464    -10.622  37.483  12.424  1.00 48.83
ATOM   3231  CA   LEU  464    -10.907  38.439  13.488  1.00 48.51
ATOM   3232  CB   LEU  464    -11.724  39.613  12.939  1.00 48.82
ATOM   3233  CG   LEU  464    -11.609  40.957  13.668  1.00 50.56
ATOM   3234  CD1  LEU  464    -12.492  41.976  12.960  1.00 50.81
ATOM   3235  CD2  LEU  464    -12.017  40.827  15.126  1.00 49.90
ATOM   3236  C    LEU  464    -11.697  37.725  14.582  1.00 46.83
ATOM   3237  O    LEU  464    -11.471  37.950  15.772  1.00 46.51
ATOM   3238  N    SER  465    -12.626  36.867  14.165  1.00 45.83
ATOM   3239  CA   SER  465    -13.452  36.104  15.095  1.00 44.66
ATOM   3240  CB   SER  465    -14.506  35.295  14.335  1.00 45.80
ATOM   3241  OG   SER  465    -15.284  34.505  15.225  1.00 45.26
ATOM   3242  C    SER  465    -12.576  35.156  15.900  1.00 43.62
ATOM   3243  O    SER  465    -12.702  35.072  17.119  1.00 43.30
ATOM   3244  N    ASP  466    -11.700  34.435  15.205  1.00 41.72
ATOM   3245  CA   ASP  466    -10.796  33.503  15.867  1.00 40.59
ATOM   3246  CB   ASP  466     -9.941  32.742  14.847  1.00 40.56
ATOM   3247  CG   ASP  466    -10.730  31.693  14.086  1.00 41.88
ATOM   3248  OD1  ASP  466    -11.651  31.083  14.674  1.00 43.44
ATOM   3249  OD2  ASP  466    -10.418  31.458  12.902  1.00 41.17
ATOM   3250  C    ASP  466     -9.885  34.265  16.817  1.00 38.59
ATOM   3251  O    ASP  466     -9.566  33.780  17.900  1.00 37.69
ATOM   3252  N    ALA  467     -9.472  35.460  16.408  1.00 37.24
ATOM   3253  CA   ALA  467     -8.596  36.291  17.226  1.00 36.59
ATOM   3254  CB   ALA  467     -8.232  37.568  16.472  1.00 35.34
ATOM   3255  C    ALA  467     -9.284  36.635  18.541  1.00 36.59
ATOM   3256  O    ALA  467     -8.707  36.477  19.616  1.00 36.56
ATOM   3257  N    LEU  468    -10.520  37.116  18.450  1.00 36.29
ATOM   3258  CA   LEU  468    -11.283  37.465  19.643  1.00 36.13
ATOM   3259  CB   LEU  468    -12.610  38.119  19.254  1.00 36.56
ATOM   3260  CG   LEU  468    -12.551  39.555  18.732  1.00 38.68
ATOM   3261  CD1  LEU  468    -13.871  39.910  18.062  1.00 40.41
ATOM   3262  CD2  LEU  468    -12.248  40.501  19.884  1.00 38.41
```

```
ATOM   3263  C    LEU   468    -11.559  36.204  20.452  1.00 35.67
ATOM   3264  O    LEU   468    -11.565  36.232  21.683  1.00 36.76
ATOM   3265  N    ALA   469    -11.788  35.099  19.747  1.00 34.59
ATOM   3266  CA   ALA   469    -12.077  33.820  20.387  1.00 34.17
ATOM   3267  CB   ALA   469    -12.370  32.768  19.332  1.00 33.45
ATOM   3268  C    ALA   469    -10.917  33.370  21.269  1.00 34.41
ATOM   3269  O    ALA   469    -11.101  33.073  22.453  1.00 33.82
ATOM   3270  N    LEU   470     -9.725  33.315  20.685  1.00 33.79
ATOM   3271  CA   LEU   470     -8.534  32.911  21.420  1.00 34.13
ATOM   3272  CB   LEU   470     -7.297  32.981  20.516  1.00 33.55
ATOM   3273  CG   LEU   470     -7.261  32.030  19.317  1.00 32.57
ATOM   3274  CD1  LEU   470     -6.006  32.282  18.490  1.00 32.93
ATOM   3275  CD2  LEU   470     -7.289  30.589  19.803  1.00 32.13
ATOM   3276  C    LEU   470     -8.347  33.816  22.627  1.00 34.20
ATOM   3277  O    LEU   470     -8.061  33.347  23.732  1.00 34.77
ATOM   3278  N    GLU   471     -8.516  35.119  22.417  1.00 33.48
ATOM   3279  CA   GLU   471     -8.373  36.085  23.499  1.00 33.79
ATOM   3280  CB   GLU   471     -8.594  37.506  22.978  1.00 34.37
ATOM   3281  CG   GLU   471     -8.617  38.553  24.080  1.00 35.68
ATOM   3282  CD   GLU   471     -8.985  39.930  23.565  1.00 36.13
ATOM   3283  OE1  GLU   471    -10.028  40.055  22.881  1.00 36.43
ATOM   3284  OE2  GLU   471     -8.233  40.884  23.851  1.00 35.43
ATOM   3285  C    GLU   471     -9.376  35.796  24.613  1.00 33.42
ATOM   3286  O    GLU   471     -9.022  35.778  25.793  1.00 32.79
ATOM   3287  N    ALA   472    -10.631  35.584  24.232  1.00 33.45
ATOM   3288  CA   ALA   472    -11.672  35.291  25.209  1.00 32.67
ATOM   3289  CB   ALA   472    -13.019  35.130  24.506  1.00 32.92
ATOM   3290  C    ALA   472    -11.308  34.015  25.963  1.00 32.35
ATOM   3291  O    ALA   472    -11.559  33.900  27.163  1.00 31.64
ATOM   3292  N    ALA   473    -10.702  33.067  25.252  1.00 31.77
ATOM   3293  CA   ALA   473    -10.297  31.790  25.840  1.00 32.34
ATOM   3294  CB   ALA   473     -9.802  30.850  24.743  1.00 32.34
ATOM   3295  C    ALA   473     -9.222  31.946  26.915  1.00 32.08
ATOM   3296  O    ALA   473     -9.133  31.132  27.835  1.00 32.20
ATOM   3297  N    GLY   474     -8.401  32.987  26.793  1.00 32.17
ATOM   3298  CA   GLY   474     -7.352  33.217  27.774  1.00 32.43
ATOM   3299  C    GLY   474     -5.991  33.553  27.182  1.00 33.77
ATOM   3300  O    GLY   474     -5.027  33.776  27.916  1.00 32.28
ATOM   3301  N    ALA   475     -5.905  33.589  25.856  1.00 34.78
ATOM   3302  CA   ALA   475     -4.646  33.905  25.189  1.00 36.82
ATOM   3303  CB   ALA   475     -4.820  33.850  23.679  1.00 37.72
ATOM   3304  C    ALA   475     -4.170  35.289  25.608  1.00 38.74
ATOM   3305  O    ALA   475     -4.896  36.276  25.466  1.00 38.36
ATOM   3306  N    GLN   476     -2.947  35.354  26.124  1.00 39.30
ATOM   3307  CA   GLN   476     -2.370  36.618  26.573  1.00 41.42
ATOM   3308  CB   GLN   476     -1.484  36.378  27.798  1.00 42.23
ATOM   3309  CG   GLN   476     -2.195  35.668  28.940  1.00 44.93
ATOM   3310  CD   GLN   476     -1.408  35.724  30.234  1.00 46.68
ATOM   3311  OE1  GLN   476     -1.176  36.802  30.780  1.00 48.89
ATOM   3312  NE2  GLN   476     -0.992  34.564  30.732  1.00 47.84
ATOM   3313  C    GLN   476     -1.561  37.296  25.468  1.00 41.29
ATOM   3314  O    GLN   476     -1.171  38.459  25.590  1.00 40.99
ATOM   3315  N    LEU   477     -1.320  36.558  24.389  1.00 40.91
ATOM   3316  CA   LEU   477     -0.565  37.058  23.247  1.00 39.33
ATOM   3317  CB   LEU   477      0.915  36.716  23.395  1.00 41.45
ATOM   3318  CG   LEU   477      1.785  37.738  24.121  1.00 41.89
ATOM   3319  CD1  LEU   477      3.142  37.133  24.420  1.00 42.32
ATOM   3320  CD2  LEU   477      1.927  38.977  23.252  1.00 43.54
ATOM   3321  C    LEU   477     -1.086  36.455  21.953  1.00 38.33
ATOM   3322  O    LEU   477     -1.714  35.400  21.964  1.00 36.02
ATOM   3323  N    LEU   478     -0.820  37.130  20.840  1.00 37.63
ATOM   3324  CA   LEU   478     -1.258  36.659  19.533  1.00 38.87
ATOM   3325  CB   LEU   478     -2.600  37.288  19.158  1.00 38.65
ATOM   3326  CG   LEU   478     -3.100  36.978  17.748  1.00 40.05
ATOM   3327  CD1  LEU   478     -3.361  35.488  17.611  1.00 39.92
ATOM   3328  CD2  LEU   478     -4.369  37.771  17.467  1.00 40.39
ATOM   3329  C    LEU   478     -0.227  37.002  18.465  1.00 38.90
ATOM   3330  O    LEU   478      0.424  38.047  18.528  1.00 39.77
ATOM   3331  N    VAL   479     -0.084  36.120  17.483  1.00 38.07
ATOM   3332  CA   VAL   479      0.862  36.337  16.402  1.00 37.86
ATOM   3333  CB   VAL   479      2.033  35.332  16.478  1.00 37.71
ATOM   3334  CG1  VAL   479      2.952  35.503  15.284  1.00 37.57
ATOM   3335  CG2  VAL   479      2.808  35.537  17.771  1.00 37.24
ATOM   3336  C    VAL   479      0.174  36.200  15.049  1.00 39.03
ATOM   3337  O    VAL   479     -0.453  35.176  14.760  1.00 37.57
ATOM   3338  N    LEU   480      0.282  37.246  14.231  1.00 38.25
ATOM   3339  CA   LEU   480     -0.307  37.251  12.893  1.00 38.69
```

```
ATOM   3340   CB   LEU   480     -1.029   38.574   12.622   1.00 39.15
ATOM   3341   CG   LEU   480     -2.307   38.841   13.418   1.00 39.59
ATOM   3342   CD1  LEU   480     -2.851   40.220   13.071   1.00 39.86
ATOM   3343   CD2  LEU   480     -3.340   37.766   13.098   1.00 40.86
ATOM   3344   C    LEU   480      0.816   37.067   11.884   1.00 38.26
ATOM   3345   O    LEU   480      1.818   37.776   11.935   1.00 37.03
ATOM   3346   N    GLU   481      0.648   36.115   10.972   1.00 38.45
ATOM   3347   CA   GLU   481      1.670   35.846    9.967   1.00 38.65
ATOM   3348   CB   GLU   481      2.287   34.469   10.204   1.00 38.33
ATOM   3349   CG   GLU   481      3.587   34.243    9.454   1.00 39.77
ATOM   3350   CD   GLU   481      4.111   32.833    9.611   1.00 38.78
ATOM   3351   OE1  GLU   481      4.045   32.300   10.741   1.00 36.25
ATOM   3352   OE2  GLU   481      4.597   32.266    8.605   1.00 39.84
ATOM   3353   C    GLU   481      1.123   35.914    8.546   1.00 39.06
ATOM   3354   O    GLU   481      0.152   35.234    8.209   1.00 37.10
ATOM   3355   N    CYS   482      1.768   36.732    7.719   1.00 41.00
ATOM   3356   CA   CYS   482      1.384   36.918    6.323   1.00 42.86
ATOM   3357   CB   CYS   482      1.841   35.721    5.490   1.00 42.97
ATOM   3358   SG   CYS   482      3.640   35.526    5.444   1.00 44.40
ATOM   3359   C    CYS   482     -0.110   37.139    6.142   1.00 43.47
ATOM   3360   O    CYS   482     -0.829   36.260    5.664   1.00 44.42
ATOM   3361   N    VAL   483     -0.564   38.327    6.524   1.00 45.25
ATOM   3362   CA   VAL   483     -1.969   38.697    6.411   1.00 47.42
ATOM   3363   CB   VAL   483     -2.682   38.573    7.783   1.00 47.80
ATOM   3364   CG1  VAL   483     -2.199   39.655    8.730   1.00 47.74
ATOM   3365   CG2  VAL   483     -4.182   38.643    7.603   1.00 48.49
ATOM   3366   C    VAL   483     -2.053   40.143    5.915   1.00 48.82
ATOM   3367   O    VAL   483     -1.243   40.987    6.304   1.00 49.32
ATOM   3368   N    PRO   484     -3.027   40.449    5.042   1.00 49.61
ATOM   3369   CD   PRO   484     -4.159   39.629    4.579   1.00 50.26
ATOM   3370   CA   PRO   484     -3.143   41.822    4.541   1.00 49.54
ATOM   3371   CB   PRO   484     -4.459   41.797    3.758   1.00 49.60
ATOM   3372   CG   PRO   484     -5.229   40.670    4.391   1.00 50.57
ATOM   3373   C    PRO   484     -3.138   42.850    5.666   1.00 49.40
ATOM   3374   O    PRO   484     -3.852   42.703    6.656   1.00 49.27
ATOM   3375   N    VAL   485     -2.317   43.884    5.504   1.00 49.36
ATOM   3376   CA   VAL   485     -2.184   44.942    6.500   1.00 49.33
ATOM   3377   CB   VAL   485     -1.436   46.156    5.915   1.00 48.81
ATOM   3378   CG1  VAL   485     -1.169   47.171    7.006   1.00 49.88
ATOM   3379   CG2  VAL   485     -0.134   45.707    5.273   1.00 49.01
ATOM   3380   C    VAL   485     -3.532   45.415    7.034   1.00 50.17
ATOM   3381   O    VAL   485     -3.732   45.505    8.248   1.00 49.86
ATOM   3382   N    GLU   486     -4.454   45.715    6.124   1.00 50.05
ATOM   3383   CA   GLU   486     -5.784   46.183    6.504   1.00 50.38
ATOM   3384   CB   GLU   486     -6.644   46.421    5.254   1.00 51.37
ATOM   3385   CG   GLU   486     -6.277   45.568    4.041   1.00 52.69
ATOM   3386   CD   GLU   486     -5.076   46.115    3.277   1.00 53.84
ATOM   3387   OE1  GLU   486     -5.120   47.296    2.872   1.00 54.68
ATOM   3388   OE2  GLU   486     -4.096   45.365    3.074   1.00 52.54
ATOM   3389   C    GLU   486     -6.503   45.228    7.456   1.00 50.03
ATOM   3390   O    GLU   486     -7.304   45.656    8.292   1.00 48.95
ATOM   3391   N    LEU   487     -6.215   43.936    7.330   1.00 49.68
ATOM   3392   CA   LEU   487     -6.837   42.932    8.187   1.00 50.28
ATOM   3393   CB   LEU   487     -6.709   41.543    7.553   1.00 51.28
ATOM   3394   CG   LEU   487     -7.813   40.529    7.871   1.00 52.57
ATOM   3395   CD1  LEU   487     -7.551   39.250    7.099   1.00 53.26
ATOM   3396   CD2  LEU   487     -7.875   40.253    9.361   1.00 53.45
ATOM   3397   C    LEU   487     -6.158   42.948    9.556   1.00 49.71
ATOM   3398   O    LEU   487     -6.811   42.801   10.591   1.00 48.49
ATOM   3399   N    ALA   488     -4.841   43.128    9.549   1.00 49.21
ATOM   3400   CA   ALA   488     -4.071   43.177   10.784   1.00 48.39
ATOM   3401   CB   ALA   488     -2.583   43.275   10.468   1.00 48.13
ATOM   3402   C    ALA   488     -4.513   44.380   11.607   1.00 48.23
ATOM   3403   O    ALA   488     -4.465   44.353   12.835   1.00 48.24
ATOM   3404   N    LYS   489     -4.946   45.433   10.923   1.00 48.36
ATOM   3405   CA   LYS   489     -5.399   46.646   11.593   1.00 48.70
ATOM   3406   CB   LYS   489     -5.738   47.721   10.564   1.00 49.47
ATOM   3407   CG   LYS   489     -4.615   48.018    9.591   1.00 51.46
ATOM   3408   CD   LYS   489     -5.070   48.969    8.495   1.00 53.59
ATOM   3409   CE   LYS   489     -3.995   49.127    7.431   1.00 54.03
ATOM   3410   NZ   LYS   489     -4.460   49.959    6.292   1.00 54.51
ATOM   3411   C    LYS   489     -6.626   46.357   12.450   1.00 48.17
ATOM   3412   O    LYS   489     -6.667   46.723   13.623   1.00 47.72
ATOM   3413   N    ARG   490     -7.627   45.704   11.863   1.00 48.64
ATOM   3414   CA   ARG   490     -8.842   45.377   12.605   1.00 48.86
ATOM   3415   CB   ARG   490     -9.846   44.622   11.725   1.00 49.59
ATOM   3416   CG   ARG   490    -10.743   45.511   10.884   1.00 50.73
```

```
ATOM   3417  CD   ARG  490   -12.089  44.836  10.629  1.00 51.13
ATOM   3418  NE   ARG  490   -11.966  43.619   9.832  1.00 51.85
ATOM   3419  CZ   ARG  490   -12.959  42.759   9.616  1.00 51.49
ATOM   3420  NH1  ARG  490   -14.157  42.977  10.141  1.00 51.44
ATOM   3421  NH2  ARG  490   -12.755  41.680   8.871  1.00 50.98
ATOM   3422  C    ARG  490    -8.525  44.532  13.831  1.00 48.05
ATOM   3423  O    ARG  490    -8.860  44.904  14.956  1.00 48.14
ATOM   3424  N    ILE  491    -7.874  43.394  13.603  1.00 47.40
ATOM   3425  CA   ILE  491    -7.509  42.477  14.679  1.00 46.20
ATOM   3426  CB   ILE  491    -6.621  41.323  14.150  1.00 45.42
ATOM   3427  CG2  ILE  491    -6.168  40.440  15.304  1.00 45.08
ATOM   3428  CG1  ILE  491    -7.403  40.494  13.126  1.00 45.31
ATOM   3429  CD1  ILE  491    -6.608  39.364  12.503  1.00 45.50
ATOM   3430  C    ILE  491    -6.777  43.188  15.811  1.00 45.67
ATOM   3431  O    ILE  491    -7.119  43.022  16.982  1.00 45.67
ATOM   3432  N    THR  492    -5.773  43.984  15.460  1.00 45.88
ATOM   3433  CA   THR  492    -4.998  44.715  16.456  1.00 45.57
ATOM   3434  CB   THR  492    -3.790  45.421  15.814  1.00 44.78
ATOM   3435  OG1  THR  492    -3.046  44.481  15.030  1.00 44.42
ATOM   3436  CG2  THR  492    -2.882  46.000  16.891  1.00 43.82
ATOM   3437  C    THR  492    -5.849  45.768  17.155  1.00 46.83
ATOM   3438  O    THR  492    -5.732  45.968  18.366  1.00 47.12
ATOM   3439  N    GLU  493    -6.699  46.444  16.387  1.00 47.21
ATOM   3440  CA   GLU  493    -7.568  47.483  16.934  1.00 48.40
ATOM   3441  CB   GLU  493    -7.898  48.523  15.860  1.00 49.93
ATOM   3442  CG   GLU  493    -6.713  49.354  15.407  1.00 52.65
ATOM   3443  CD   GLU  493    -7.088  50.372  14.347  1.00 54.51
ATOM   3444  OE1  GLU  493    -7.493  49.957  13.238  1.00 55.78
ATOM   3445  OE2  GLU  493    -6.980  51.585  14.623  1.00 55.00
ATOM   3446  C    GLU  493    -8.866  46.909  17.486  1.00 47.51
ATOM   3447  O    GLU  493    -9.806  47.651  17.776  1.00 48.38
ATOM   3448  N    ALA  494    -8.914  45.587  17.630  1.00 45.76
ATOM   3449  CA   ALA  494   -10.103  44.916  18.143  1.00 43.41
ATOM   3450  CB   ALA  494   -10.674  43.983  17.081  1.00 43.68
ATOM   3451  C    ALA  494    -9.790  44.129  19.407  1.00 41.36
ATOM   3452  O    ALA  494   -10.674  43.879  20.226  1.00 40.45
ATOM   3453  N    LEU  495    -8.528  43.741  19.559  1.00 39.65
ATOM   3454  CA   LEU  495    -8.103  42.974  20.723  1.00 37.83
ATOM   3455  CB   LEU  495    -7.126  41.866  20.310  1.00 37.72
ATOM   3456  CG   LEU  495    -7.606  40.812  19.305  1.00 38.81
ATOM   3457  CD1  LEU  495    -6.498  39.797  19.069  1.00 37.67
ATOM   3458  CD2  LEU  495    -8.851  40.121  19.825  1.00 39.75
ATOM   3459  C    LEU  495    -7.446  43.851  21.780  1.00 37.16
ATOM   3460  O    LEU  495    -6.866  44.895  21.473  1.00 35.11
ATOM   3461  N    ALA  496    -7.542  43.414  23.031  1.00 36.75
ATOM   3462  CA   ALA  496    -6.954  44.141  24.143  1.00 37.22
ATOM   3463  CB   ALA  496    -7.780  43.927  25.399  1.00 36.82
ATOM   3464  C    ALA  496    -5.527  43.656  24.360  1.00 37.76
ATOM   3465  O    ALA  496    -4.656  44.427  24.754  1.00 38.66
ATOM   3466  N    ILE  497    -5.291  42.374  24.097  1.00 38.35
ATOM   3467  CA   ILE  497    -3.961  41.793  24.263  1.00 38.83
ATOM   3468  CB   ILE  497    -4.015  40.246  24.284  1.00 37.92
ATOM   3469  CG2  ILE  497    -4.894  39.770  25.438  1.00 37.32
ATOM   3470  CG1  ILE  497    -4.558  39.728  22.950  1.00 38.42
ATOM   3471  CD1  ILE  497    -4.531  38.220  22.814  1.00 38.06
ATOM   3472  C    ILE  497    -3.052  42.220  23.117  1.00 39.35
ATOM   3473  O    ILE  497    -3.517  42.443  21.998  1.00 40.82
ATOM   3474  N    PRO  498    -1.739  42.333  23.377  1.00 39.89
ATOM   3475  CD   PRO  498    -1.048  42.058  24.648  1.00 38.22
ATOM   3476  CA   PRO  498    -0.786  42.737  22.336  1.00 39.86
ATOM   3477  CB   PRO  498     0.541  42.807  23.093  1.00 40.07
ATOM   3478  CG   PRO  498     0.359  41.804  24.190  1.00 39.95
ATOM   3479  C    PRO  498    -0.745  41.764  21.158  1.00 40.23
ATOM   3480  O    PRO  498    -0.824  40.551  21.341  1.00 40.13
ATOM   3481  N    VAL  499    -0.631  42.302  19.947  1.00 40.04
ATOM   3482  CA   VAL  499    -0.588  41.475  18.746  1.00 39.96
ATOM   3483  CB   VAL  499    -1.711  41.877  17.754  1.00 39.82
ATOM   3484  CG1  VAL  499    -1.678  40.978  16.527  1.00 39.71
ATOM   3485  CG2  VAL  499    -3.068  41.785  18.440  1.00 39.57
ATOM   3486  C    VAL  499     0.762  41.592  18.040  1.00 40.53
ATOM   3487  O    VAL  499     1.081  42.633  17.468  1.00 40.65
ATOM   3488  N    ILE  500     1.555  40.524  18.089  1.00 41.28
ATOM   3489  CA   ILE  500     2.865  40.509  17.444  1.00 41.57
ATOM   3490  CB   ILE  500     3.828  39.525  18.142  1.00 42.09
ATOM   3491  CG2  ILE  500     5.176  39.522  17.429  1.00 42.77
ATOM   3492  CG1  ILE  500     4.006  39.927  19.608  1.00 43.30
ATOM   3493  CD1  ILE  500     4.799  38.930  20.434  1.00 43.71
```

```
ATOM    3494  C    ILE   500      2.695   40.090   15.990   1.00  41.61
ATOM    3495  O    ILE   500      2.071   39.068   15.693   1.00  40.85
ATOM    3496  N    GLY   501      3.254   40.881   15.081   1.00  40.82
ATOM    3497  CA   GLY   501      3.118   40.572   13.672   1.00  40.29
ATOM    3498  C    GLY   501      4.371   40.098   12.968   1.00  39.63
ATOM    3499  O    GLY   501      5.494   40.348   13.405   1.00  39.28
ATOM    3500  N    ILE   502      4.154   39.401   11.860   1.00  39.72
ATOM    3501  CA   ILE   502      5.226   38.875   11.032   1.00  41.34
ATOM    3502  CB   ILE   502      5.709   37.488   11.553   1.00  41.52
ATOM    3503  CG2  ILE   502      4.522   36.582   11.830   1.00  42.33
ATOM    3504  CG1  ILE   502      6.659   36.845   10.544   1.00  42.33
ATOM    3505  CD1  ILE   502      7.958   37.584   10.375   1.00  43.95
ATOM    3506  C    ILE   502      4.676   38.766    9.609   1.00  42.06
ATOM    3507  O    ILE   502      4.029   37.782    9.245   1.00  42.10
ATOM    3508  N    GLY   503      4.922   39.801    8.812   1.00  43.11
ATOM    3509  CA   GLY   503      4.426   39.817    7.449   1.00  44.13
ATOM    3510  C    GLY   503      2.981   40.273    7.444   1.00  44.13
ATOM    3511  O    GLY   503      2.215   39.950    6.535   1.00  44.93
ATOM    3512  N    ALA   504      2.612   41.028    8.474   1.00  44.37
ATOM    3513  CA   ALA   504      1.255   41.540    8.610   1.00  45.44
ATOM    3514  CB   ALA   504      0.612   40.976    9.871   1.00  45.34
ATOM    3515  C    ALA   504      1.249   43.065    8.663   1.00  45.59
ATOM    3516  O    ALA   504      0.245   43.677    9.026   1.00  45.09
ATOM    3517  N    GLY   505      2.373   43.672    8.296   1.00  46.27
ATOM    3518  CA   GLY   505      2.465   45.119    8.316   1.00  47.16
ATOM    3519  C    GLY   505      2.955   45.644    9.652   1.00  47.80
ATOM    3520  O    GLY   505      3.187   44.870   10.581   1.00  46.72
ATOM    3521  N    ASN   506      3.106   46.963    9.749   1.00  47.19
ATOM    3522  CA   ASN   506      3.582   47.600   10.974   1.00  47.23
ATOM    3523  CB   ASN   506      4.561   48.725   10.624   1.00  47.68
ATOM    3524  CG   ASN   506      3.972   49.737    9.656   1.00  47.63
ATOM    3525  OD1  ASN   506      4.678   50.613    9.156   1.00  49.34
ATOM    3526  ND2  ASN   506      2.676   49.623    9.388   1.00  47.05
ATOM    3527  C    ASN   506      2.445   48.146   11.836   1.00  47.02
ATOM    3528  O    ASN   506      2.671   48.962   12.734   1.00  45.93
ATOM    3529  N    VAL   507      1.229   47.681   11.561   1.00  46.55
ATOM    3530  CA   VAL   507      0.046   48.106   12.300   1.00  46.94
ATOM    3531  CB   VAL   507     -1.238   47.855   11.482   1.00  47.55
ATOM    3532  CG1  VAL   507     -2.447   48.398   12.228   1.00  48.40
ATOM    3533  CG2  VAL   507     -1.117   48.506   10.117   1.00  48.35
ATOM    3534  C    VAL   507     -0.070   47.357   13.622   1.00  46.72
ATOM    3535  O    VAL   507     -0.693   47.842   14.567   1.00  47.09
ATOM    3536  N    THR   508      0.531   46.171   13.683   1.00  46.59
ATOM    3537  CA   THR   508      0.494   45.355   14.896   1.00  46.09
ATOM    3538  CB   THR   508      1.109   43.955   14.653   1.00  46.09
ATOM    3539  OG1  THR   508      2.438   44.091   14.138   1.00  46.20
ATOM    3540  CG2  THR   508      0.264   43.166   13.658   1.00  45.82
ATOM    3541  C    THR   508      1.239   46.036   16.042   1.00  45.51
ATOM    3542  O    THR   508      2.017   46.964   15.823   1.00  45.43
ATOM    3543  N    ASP   509      0.993   45.572   17.263   1.00  44.71
ATOM    3544  CA   ASP   509      1.630   46.140   18.447   1.00  44.33
ATOM    3545  CB   ASP   509      0.940   45.627   19.713   1.00  43.80
ATOM    3546  CG   ASP   509     -0.541   45.942   19.738   1.00  43.81
ATOM    3547  OD1  ASP   509     -0.899   47.139   19.730   1.00  41.97
ATOM    3548  OD2  ASP   509     -1.349   44.990   19.764   1.00  44.48
ATOM    3549  C    ASP   509      3.113   45.801   18.510   1.00  44.55
ATOM    3550  O    ASP   509      3.914   46.576   19.030   1.00  44.42
ATOM    3551  N    GLY   510      3.473   44.636   17.983   1.00  44.35
ATOM    3552  CA   GLY   510      4.864   44.225   18.001   1.00  44.15
ATOM    3553  C    GLY   510      5.269   43.479   16.749   1.00  44.41
ATOM    3554  O    GLY   510      4.445   43.221   15.870   1.00  45.25
ATOM    3555  N    GLN   511      6.547   43.129   16.667   1.00  43.48
ATOM    3556  CA   GLN   511      7.063   42.406   15.513   1.00  42.71
ATOM    3557  CB   GLN   511      7.893   43.342   14.625   1.00  42.63
ATOM    3558  CG   GLN   511      7.109   44.465   13.958   1.00  39.39
ATOM    3559  CD   GLN   511      6.088   43.957   12.959   1.00  38.03
ATOM    3560  OE1  GLN   511      6.386   43.093   12.136   1.00  36.45
ATOM    3561  NE2  GLN   511      4.878   44.502   13.017   1.00  37.24
ATOM    3562  C    GLN   511      7.930   41.238   15.959   1.00  43.26
ATOM    3563  O    GLN   511      8.402   41.197   17.094   1.00  42.66
ATOM    3564  N    ILE   512      8.130   40.287   15.055   1.00  43.65
ATOM    3565  CA   ILE   512      8.957   39.125   15.343   1.00  44.30
ATOM    3566  CB   ILE   512      8.159   38.052   16.124   1.00  44.90
ATOM    3567  CG2  ILE   512      7.079   37.448   15.234   1.00  44.70
ATOM    3568  CG1  ILE   512      9.108   36.962   16.627   1.00  43.78
ATOM    3569  CD1  ILE   512      8.463   35.995   17.595   1.00  43.66
ATOM    3570  C    ILE   512      9.472   38.536   14.028   1.00  44.66
```

```
ATOM    3571  O    ILE   512       8.843  38.689  12.979  1.00 44.73
ATOM    3572  N    LEU   513      10.625  37.879  14.087  1.00 45.11
ATOM    3573  CA   LEU   513      11.215  37.274  12.903  1.00 45.41
ATOM    3574  CB   LEU   513      11.690  38.360  11.936  1.00 47.61
ATOM    3575  CG   LEU   513      11.333  38.180  10.457  1.00 49.48
ATOM    3576  CD1  LEU   513      12.121  39.187   9.645  1.00 50.43
ATOM    3577  CD2  LEU   513      11.651  36.759   9.988  1.00 50.20
ATOM    3578  C    LEU   513      12.400  36.396  13.288  1.00 44.78
ATOM    3579  O    LEU   513      13.020  36.594  14.337  1.00 44.20
ATOM    3580  N    VAL   514      12.714  35.428  12.432  1.00 43.32
ATOM    3581  CA   VAL   514      13.834  34.532  12.683  1.00 43.17
ATOM    3582  CB   VAL   514      13.914  33.413  11.623  1.00 43.69
ATOM    3583  CG1  VAL   514      15.057  32.460  11.960  1.00 43.51
ATOM    3584  CG2  VAL   514      12.594  32.669  11.554  1.00 43.46
ATOM    3585  C    VAL   514      15.124  35.342  12.638  1.00 42.43
ATOM    3586  O    VAL   514      15.377  36.069  11.679  1.00 42.48
ATOM    3587  N    MET   515      15.931  35.214  13.684  1.00 41.21
ATOM    3588  CA   MET   515      17.190  35.935  13.772  1.00 40.22
ATOM    3589  CB   MET   515      17.929  35.543  15.050  1.00 38.49
ATOM    3590  CG   MET   515      18.189  34.057  15.180  1.00 37.77
ATOM    3591  SD   MET   515      19.693  33.741  16.107  1.00 37.43
ATOM    3592  CE   MET   515      20.902  33.853  14.776  1.00 39.24
ATOM    3593  C    MET   515      18.086  35.669  12.569  1.00 40.31
ATOM    3594  O    MET   515      18.749  36.575  12.063  1.00 39.94
ATOM    3595  N    HIS   516      18.100  34.420  12.116  1.00 40.39
ATOM    3596  CA   HIS   516      18.916  34.011  10.978  1.00 41.60
ATOM    3597  CB   HIS   516      18.683  32.523  10.694  1.00 40.66
ATOM    3598  CG   HIS   516      19.230  31.619  11.755  1.00 39.06
ATOM    3599  CD2  HIS   516      18.682  31.162  12.906  1.00 37.78
ATOM    3600  ND1  HIS   516      20.517  31.128  11.725  1.00 38.08
ATOM    3601  CE1  HIS   516      20.740  30.409  12.810  1.00 35.88
ATOM    3602  NE2  HIS   516      19.642  30.415  13.544  1.00 37.95
ATOM    3603  C    HIS   516      18.657  34.836   9.718  1.00 42.74
ATOM    3604  O    HIS   516      19.558  35.025   8.898  1.00 42.29
ATOM    3605  N    ASP   517      17.429  35.323   9.567  1.00 43.70
ATOM    3606  CA   ASP   517      17.064  36.134   8.410  1.00 45.81
ATOM    3607  CB   ASP   517      15.640  35.807   7.953  1.00 45.49
ATOM    3608  CG   ASP   517      15.572  34.538   7.124  1.00 47.31
ATOM    3609  OD1  ASP   517      16.287  34.456   6.104  1.00 47.95
ATOM    3610  OD2  ASP   517      14.803  33.627   7.481  1.00 48.46
ATOM    3611  C    ASP   517      17.175  37.625   8.708  1.00 46.65
ATOM    3612  O    ASP   517      17.175  38.452   7.794  1.00 47.65
ATOM    3613  N    ALA   518      17.272  37.965   9.988  1.00 47.52
ATOM    3614  CA   ALA   518      17.379  39.358  10.404  1.00 48.26
ATOM    3615  CB   ALA   518      16.748  39.540  11.780  1.00 47.98
ATOM    3616  C    ALA   518      18.833  39.817  10.432  1.00 48.77
ATOM    3617  O    ALA   518      19.113  41.014  10.470  1.00 48.43
ATOM    3618  N    PHE   519      19.758  38.863  10.412  1.00 49.79
ATOM    3619  CA   PHE   519      21.178  39.193  10.437  1.00 50.88
ATOM    3620  CB   PHE   519      21.810  38.675  11.723  1.00 51.40
ATOM    3621  CG   PHE   519      21.076  39.092  12.957  1.00 52.43
ATOM    3622  CD1  PHE   519      20.855  40.436  13.228  1.00 53.32
ATOM    3623  CD2  PHE   519      20.594  38.141  13.845  1.00 53.65
ATOM    3624  CE1  PHE   519      20.160  40.829  14.369  1.00 53.53
ATOM    3625  CE2  PHE   519      19.899  38.522  14.988  1.00 54.19
ATOM    3626  CZ   PHE   519      19.682  39.869  15.251  1.00 53.89
ATOM    3627  C    PHE   519      21.915  38.622   9.234  1.00 51.31
ATOM    3628  O    PHE   519      23.130  38.413   9.277  1.00 51.70
ATOM    3629  N    GLY   520      21.168  38.369   8.165  1.00 51.46
ATOM    3630  CA   GLY   520      21.752  37.832   6.950  1.00 52.29
ATOM    3631  C    GLY   520      22.668  36.646   7.172  1.00 52.89
ATOM    3632  O    GLY   520      23.880  36.740   6.973  1.00 52.01
ATOM    3633  N    ILE   521      22.085  35.526   7.582  1.00 53.71
ATOM    3634  CA   ILE   521      22.844  34.309   7.830  1.00 54.45
ATOM    3635  CB   ILE   521      22.669  33.839   9.287  1.00 53.41
ATOM    3636  CG2  ILE   521      23.483  32.580   9.531  1.00 52.98
ATOM    3637  CG1  ILE   521      23.109  34.948  10.243  1.00 52.97
ATOM    3638  CD1  ILE   521      22.872  34.629  11.702  1.00 51.81
ATOM    3639  C    ILE   521      22.375  33.201   6.894  1.00 55.91
ATOM    3640  O    ILE   521      23.163  32.358   6.467  1.00 56.51
ATOM    3641  N    THR   522      21.089  33.216   6.566  1.00 57.60
ATOM    3642  CA   THR   522      20.517  32.203   5.692  1.00 60.04
ATOM    3643  CB   THR   522      19.147  31.738   6.218  1.00 60.24
ATOM    3644  OG1  THR   522      18.278  32.869   6.353  1.00 59.37
ATOM    3645  CG2  THR   522      19.301  31.058   7.569  1.00 60.73
ATOM    3646  C    THR   522      20.355  32.683   4.252  1.00 61.62
ATOM    3647  O    THR   522      19.702  33.695   3.992  1.00 61.80
```

```
ATOM   3648  N    GLY   523      20.959  31.942   3.324  1.00 63.15
ATOM   3649  CA   GLY   523      20.881  32.276   1.911  1.00 65.08
ATOM   3650  C    GLY   523      20.874  33.762   1.601  1.00 66.40
ATOM   3651  O    GLY   523      21.492  34.563   2.305  1.00 66.60
ATOM   3652  N    GLY   524      20.170  34.128   0.536  1.00 66.95
ATOM   3653  CA   GLY   524      20.092  35.522   0.146  1.00 67.88
ATOM   3654  C    GLY   524      18.666  35.958  -0.116  1.00 68.78
ATOM   3655  O    GLY   524      18.280  37.078   0.220  1.00 69.41
ATOM   3656  N    HIS   525      17.880  35.072  -0.719  1.00 69.01
ATOM   3657  CA   HIS   525      16.487  35.376  -1.023  1.00 69.66
ATOM   3658  CB   HIS   525      15.987  34.488  -2.165  1.00 70.70
ATOM   3659  CG   HIS   525      16.435  34.939  -3.520  1.00 71.89
ATOM   3660  CD2  HIS   525      17.174  34.317  -4.469  1.00 72.56
ATOM   3661  ND1  HIS   525      16.105  36.172  -4.039  1.00 72.33
ATOM   3662  CE1  HIS   525      16.620  36.290  -5.250  1.00 72.53
ATOM   3663  NE2  HIS   525      17.273  35.178  -5.535  1.00 72.71
ATOM   3664  C    HIS   525      15.578  35.208   0.191  1.00 69.38
ATOM   3665  O    HIS   525      14.651  34.398   0.177  1.00 69.45
ATOM   3666  N    ILE   526      15.849  35.979   1.240  1.00 68.69
ATOM   3667  CA   ILE   526      15.047  35.922   2.457  1.00 67.80
ATOM   3668  CB   ILE   526      15.558  36.927   3.512  1.00 67.79
ATOM   3669  CG2  ILE   526      17.003  36.613   3.872  1.00 68.10
ATOM   3670  CG1  ILE   526      15.431  38.354   2.974  1.00 67.42
ATOM   3671  CD1  ILE   526      15.759  39.424   3.991  1.00 67.22
ATOM   3672  C    ILE   526      13.601  36.271   2.116  1.00 67.09
ATOM   3673  O    ILE   526      13.325  36.817   1.050  1.00 67.20
ATOM   3674  N    PRO   527      12.657  35.959   3.018  1.00 66.11
ATOM   3675  CD   PRO   527      12.814  35.365   4.356  1.00 66.02
ATOM   3676  CA   PRO   527      11.251  36.270   2.747  1.00 65.35
ATOM   3677  CB   PRO   527      10.532  35.712   3.974  1.00 65.35
ATOM   3678  CG   PRO   527      11.563  35.834   5.053  1.00 65.87
ATOM   3679  C    PRO   527      11.023  37.768   2.555  1.00 64.42
ATOM   3680  O    PRO   527      11.728  38.591   3.141  1.00 64.06
ATOM   3681  N    LYS   528      10.038  38.110   1.729  1.00 63.60
ATOM   3682  CA   LYS   528       9.719  39.506   1.440  1.00 62.63
ATOM   3683  CB   LYS   528       8.504  39.596   0.507  1.00 63.43
ATOM   3684  CG   LYS   528       8.568  38.689  -0.715  1.00 64.83
ATOM   3685  CD   LYS   528       8.054  37.291  -0.389  1.00 65.58
ATOM   3686  CE   LYS   528       8.237  36.336  -1.559  1.00 65.50
ATOM   3687  NZ   LYS   528       9.678  36.076  -1.831  1.00 65.11
ATOM   3688  C    LYS   528       9.443  40.317   2.702  1.00 61.12
ATOM   3689  O    LYS   528       9.874  41.465   2.815  1.00 60.81
ATOM   3690  N    PHE   529       8.726  39.715   3.648  1.00 59.49
ATOM   3691  CA   PHE   529       8.379  40.383   4.899  1.00 57.86
ATOM   3692  CB   PHE   529       7.258  39.611   5.608  1.00 57.20
ATOM   3693  CG   PHE   529       7.586  38.168   5.885  1.00 56.39
ATOM   3694  CD1  PHE   529       8.487  37.820   6.887  1.00 55.45
ATOM   3695  CD2  PHE   529       6.990  37.153   5.140  1.00 56.22
ATOM   3696  CE1  PHE   529       8.787  36.483   7.146  1.00 55.50
ATOM   3697  CE2  PHE   529       7.283  35.813   5.390  1.00 55.77
ATOM   3698  CZ   PHE   529       8.183  35.478   6.396  1.00 55.99
ATOM   3699  C    PHE   529       9.564  40.562   5.844  1.00 56.78
ATOM   3700  O    PHE   529       9.463  41.272   6.843  1.00 56.44
ATOM   3701  N    ALA   530      10.684  39.923   5.525  1.00 55.87
ATOM   3702  CA   ALA   530      11.878  40.015   6.357  1.00 55.61
ATOM   3703  CB   ALA   530      12.612  38.681   6.366  1.00 55.37
ATOM   3704  C    ALA   530      12.809  41.114   5.864  1.00 55.36
ATOM   3705  O    ALA   530      12.597  41.687   4.795  1.00 55.63
ATOM   3706  N    LYS   531      13.842  41.399   6.651  1.00 55.00
ATOM   3707  CA   LYS   531      14.816  42.425   6.301  1.00 54.83
ATOM   3708  CB   LYS   531      14.303  43.806   6.712  1.00 54.88
ATOM   3709  CG   LYS   531      15.283  44.932   6.428  1.00 55.59
ATOM   3710  CD   LYS   531      14.726  46.280   6.851  1.00 55.93
ATOM   3711  CE   LYS   531      15.716  47.397   6.560  1.00 56.02
ATOM   3712  NZ   LYS   531      15.170  48.729   6.933  1.00 55.93
ATOM   3713  C    LYS   531      16.161  42.166   6.970  1.00 54.84
ATOM   3714  O    LYS   531      16.220  41.840   8.154  1.00 54.41
ATOM   3715  N    ASN   532      17.237  42.315   6.203  1.00 54.78
ATOM   3716  CA   ASN   532      18.591  42.110   6.708  1.00 54.97
ATOM   3717  CB   ASN   532      19.544  41.805   5.548  1.00 54.87
ATOM   3718  CG   ASN   532      20.931  41.399   6.017  1.00 53.96
ATOM   3719  OD1  ASN   532      21.469  41.963   6.970  1.00 54.05
ATOM   3720  ND2  ASN   532      21.522  40.425   5.335  1.00 54.07
ATOM   3721  C    ASN   532      19.061  43.373   7.424  1.00 55.48
ATOM   3722  O    ASN   532      19.215  44.422   6.798  1.00 56.16
ATOM   3723  N    PHE   533      19.290  43.275   8.730  1.00 55.65
ATOM   3724  CA   PHE   533      19.744  44.425   9.503  1.00 56.07
```

```
ATOM   3725  CB   PHE   533        19.055  44.463  10.871  1.00 56.06
ATOM   3726  CG   PHE   533        17.607  44.863  10.812  1.00 56.39
ATOM   3727  CD1  PHE   533        16.649  43.993  10.303  1.00 56.26
ATOM   3728  CD2  PHE   533        17.204  46.124  11.245  1.00 56.64
ATOM   3729  CE1  PHE   533        15.311  44.371  10.228  1.00 56.57
ATOM   3730  CE2  PHE   533        15.868  46.511  11.173  1.00 56.36
ATOM   3731  CZ   PHE   533        14.921  45.634  10.663  1.00 56.79
ATOM   3732  C    PHE   533        21.255  44.446   9.695  1.00 56.80
ATOM   3733  O    PHE   533        21.808  45.424  10.199  1.00 56.46
ATOM   3734  N    LEU   534        21.920  43.367   9.297  1.00 57.79
ATOM   3735  CA   LEU   534        23.370  43.281   9.427  1.00 58.91
ATOM   3736  CB   LEU   534        23.811  41.820   9.535  1.00 58.06
ATOM   3737  CG   LEU   534        25.310  41.588   9.748  1.00 57.55
ATOM   3738  CD1  LEU   534        25.744  42.191  11.076  1.00 56.50
ATOM   3739  CD2  LEU   534        25.605  40.098   9.718  1.00 57.05
ATOM   3740  C    LEU   534        24.041  43.928   8.220  1.00 60.52
ATOM   3741  O    LEU   534        25.201  44.337   8.284  1.00 60.29
ATOM   3742  N    ALA   535        23.303  44.010   7.118  1.00 62.13
ATOM   3743  CA   ALA   535        23.816  44.611   5.892  1.00 64.07
ATOM   3744  CB   ALA   535        22.930  44.228   4.713  1.00 64.06
ATOM   3745  C    ALA   535        23.859  46.127   6.048  1.00 65.26
ATOM   3746  O    ALA   535        24.618  46.817   5.363  1.00 65.11
ATOM   3747  N    GLU   536        23.034  46.633   6.959  1.00 66.37
ATOM   3748  CA   GLU   536        22.955  48.064   7.233  1.00 67.19
ATOM   3749  CB   GLU   536        21.583  48.408   7.823  1.00 68.14
ATOM   3750  CG   GLU   536        20.397  47.779   7.094  1.00 69.56
ATOM   3751  CD   GLU   536        20.159  48.366   5.713  1.00 70.40
ATOM   3752  OE1  GLU   536        21.070  48.290   4.861  1.00 71.10
ATOM   3753  OE2  GLU   536        19.053  48.904   5.481  1.00 70.27
ATOM   3754  C    GLU   536        24.050  48.445   8.228  1.00 66.96
ATOM   3755  O    GLU   536        24.057  49.552   8.765  1.00 67.14
ATOM   3756  N    THR   537        24.969  47.515   8.472  1.00 66.36
ATOM   3757  CA   THR   537        26.069  47.741   9.402  1.00 65.80
ATOM   3758  CB   THR   537        25.557  47.783  10.860  1.00 65.76
ATOM   3759  OG1  THR   537        26.640  48.104  11.742  1.00 65.38
ATOM   3760  CG2  THR   537        24.962  46.436  11.256  1.00 65.93
ATOM   3761  C    THR   537        27.121  46.637   9.269  1.00 65.16
ATOM   3762  O    THR   537        27.200  45.962   8.242  1.00 65.26
ATOM   3763  N    GLY   538        27.931  46.463  10.308  1.00 64.34
ATOM   3764  CA   GLY   538        28.959  45.439  10.282  1.00 63.04
ATOM   3765  C    GLY   538        29.062  44.734  11.617  1.00 62.37
ATOM   3766  O    GLY   538        30.023  44.011  11.883  1.00 62.04
ATOM   3767  N    ASP   539        28.060  44.949  12.462  1.00 61.49
ATOM   3768  CA   ASP   539        28.021  44.342  13.785  1.00 60.74
ATOM   3769  CB   ASP   539        28.268  45.407  14.857  1.00 62.06
ATOM   3770  CG   ASP   539        28.250  44.838  16.262  1.00 63.43
ATOM   3771  OD1  ASP   539        28.222  45.633  17.226  1.00 63.49
ATOM   3772  OD2  ASP   539        28.270  43.595  16.402  1.00 64.82
ATOM   3773  C    ASP   539        26.666  43.684  14.023  1.00 59.48
ATOM   3774  O    ASP   539        25.624  44.258  13.705  1.00 58.85
ATOM   3775  N    ILE   540        26.685  42.478  14.582  1.00 58.12
ATOM   3776  CA   ILE   540        25.455  41.747  14.867  1.00 56.14
ATOM   3777  CB   ILE   540        25.760  40.355  15.456  1.00 57.05
ATOM   3778  CG2  ILE   540        24.458  39.622  15.772  1.00 56.67
ATOM   3779  CG1  ILE   540        26.596  39.549  14.461  1.00 56.82
ATOM   3780  CD1  ILE   540        27.153  38.264  15.030  1.00 57.97
ATOM   3781  C    ILE   540        24.612  42.534  15.864  1.00 54.58
ATOM   3782  O    ILE   540        23.410  42.714  15.669  1.00 53.94
ATOM   3783  N    ARG   541        25.252  43.002  16.932  1.00 52.23
ATOM   3784  CA   ARG   541        24.564  43.779  17.955  1.00 50.98
ATOM   3785  CB   ARG   541        25.524  44.108  19.100  1.00 49.65
ATOM   3786  CG   ARG   541        26.008  42.882  19.852  1.00 48.84
ATOM   3787  CD   ARG   541        27.008  43.238  20.938  1.00 47.15
ATOM   3788  NE   ARG   541        27.476  42.053  21.655  1.00 47.04
ATOM   3789  CZ   ARG   541        28.122  41.038  21.087  1.00 47.57
ATOM   3790  NH1  ARG   541        28.383  41.054  19.787  1.00 47.71
ATOM   3791  NH2  ARG   541        28.509  40.004  21.821  1.00 47.56
ATOM   3792  C    ARG   541        23.999  45.066  17.359  1.00 50.80
ATOM   3793  O    ARG   541        22.915  45.515  17.739  1.00 50.76
ATOM   3794  N    ALA   542        24.735  45.654  16.422  1.00 50.14
ATOM   3795  CA   ALA   542        24.297  46.882  15.770  1.00 49.97
ATOM   3796  CB   ALA   542        25.369  47.376  14.806  1.00 49.83
ATOM   3797  C    ALA   542        22.996  46.614  15.020  1.00 49.62
ATOM   3798  O    ALA   542        22.065  47.417  15.064  1.00 49.97
ATOM   3799  N    ALA   543        22.942  45.479  14.332  1.00 49.14
ATOM   3800  CA   ALA   543        21.753  45.095  13.583  1.00 48.56
ATOM   3801  CB   ALA   543        22.022  43.819  12.794  1.00 47.62
```

ATOM	3802	C	ALA	543	20.593	44.882	14.554	1.00	48.49
ATOM	3803	O	ALA	543	19.431	45.095	14.205	1.00	48.03
ATOM	3804	N	VAL	544	20.923	44.462	15.773	1.00	47.91
ATOM	3805	CA	VAL	544	19.921	44.220	16.807	1.00	48.15
ATOM	3806	CB	VAL	544	20.547	43.544	18.054	1.00	47.72
ATOM	3807	CG1	VAL	544	19.493	43.354	19.133	1.00	48.12
ATOM	3808	CG2	VAL	544	21.151	42.203	17.670	1.00	47.67
ATOM	3809	C	VAL	544	19.280	45.535	17.234	1.00	48.25
ATOM	3810	O	VAL	544	18.055	45.670	17.229	1.00	48.02
ATOM	3811	N	ARG	545	20.113	46.503	17.602	1.00	47.95
ATOM	3812	CA	ARG	545	19.613	47.804	18.025	1.00	48.51
ATOM	3813	CB	ARG	545	20.771	48.699	18.471	1.00	47.82
ATOM	3814	CG	ARG	545	21.478	48.204	19.722	1.00	49.07
ATOM	3815	CD	ARG	545	22.351	49.289	20.335	1.00	49.84
ATOM	3816	NE	ARG	545	23.473	49.659	19.477	1.00	51.11
ATOM	3817	CZ	ARG	545	24.521	48.877	19.235	1.00	51.17
ATOM	3818	NH1	ARG	545	24.596	47.674	19.787	1.00	52.25
ATOM	3819	NH2	ARG	545	25.497	49.300	18.444	1.00	51.42
ATOM	3820	C	ARG	545	18.826	48.481	16.908	1.00	48.39
ATOM	3821	O	ARG	545	17.806	49.119	17.161	1.00	47.66
ATOM	3822	N	GLN	546	19.296	48.338	15.674	1.00	49.12
ATOM	3823	CA	GLN	546	18.610	48.941	14.538	1.00	50.17
ATOM	3824	CB	GLN	546	19.428	48.766	13.257	1.00	51.51
ATOM	3825	CG	GLN	546	18.835	49.481	12.052	1.00	54.04
ATOM	3826	CD	GLN	546	19.635	49.256	10.786	1.00	55.80
ATOM	3827	OE1	GLN	546	20.829	49.555	10.731	1.00	57.97
ATOM	3828	NE2	GLN	546	18.980	48.730	9.757	1.00	56.73
ATOM	3829	C	GLN	546	17.245	48.282	14.369	1.00	50.05
ATOM	3830	O	GLN	546	16.268	48.936	14.001	1.00	49.98
ATOM	3831	N	TYR	547	17.189	46.982	14.640	1.00	49.32
ATOM	3832	CA	TYR	547	15.948	46.227	14.537	1.00	48.54
ATOM	3833	CB	TYR	547	16.203	44.750	14.840	1.00	49.78
ATOM	3834	CG	TYR	547	14.944	43.925	14.955	1.00	50.44
ATOM	3835	CD1	TYR	547	14.056	43.822	13.885	1.00	51.69
ATOM	3836	CE1	TYR	547	12.893	43.064	13.984	1.00	51.91
ATOM	3837	CD2	TYR	547	14.637	43.249	16.135	1.00	51.50
ATOM	3838	CE2	TYR	547	13.476	42.487	16.247	1.00	51.56
ATOM	3839	CZ	TYR	547	12.610	42.399	15.168	1.00	52.16
ATOM	3840	OH	TYR	547	11.463	41.646	15.271	1.00	51.53
ATOM	3841	C	TYR	547	14.926	46.781	15.523	1.00	47.25
ATOM	3842	O	TYR	547	13.793	47.092	15.155	1.00	46.01
ATOM	3843	N	MET	548	15.345	46.902	16.779	1.00	45.68
ATOM	3844	CA	MET	548	14.491	47.421	17.839	1.00	45.05
ATOM	3845	CB	MET	548	15.273	47.471	19.153	1.00	43.72
ATOM	3846	CG	MET	548	15.852	46.136	19.574	1.00	44.22
ATOM	3847	SD	MET	548	17.010	46.272	20.949	1.00	43.86
ATOM	3848	CE	MET	548	15.902	46.115	22.333	1.00	45.50
ATOM	3849	C	MET	548	14.016	48.823	17.479	1.00	45.08
ATOM	3850	O	MET	548	12.859	49.186	17.708	1.00	43.72
ATOM	3851	N	ALA	549	14.929	49.603	16.910	1.00	45.01
ATOM	3852	CA	ALA	549	14.643	50.973	16.515	1.00	45.18
ATOM	3853	CB	ALA	549	15.923	51.651	16.044	1.00	44.23
ATOM	3854	C	ALA	549	13.581	51.042	15.424	1.00	45.78
ATOM	3855	O	ALA	549	12.518	51.625	15.626	1.00	45.86
ATOM	3856	N	GLU	550	13.867	50.442	14.272	1.00	46.83
ATOM	3857	CA	GLU	550	12.925	50.460	13.156	1.00	48.63
ATOM	3858	CB	GLU	550	13.470	49.657	11.975	1.00	49.72
ATOM	3859	CG	GLU	550	14.515	50.394	11.160	1.00	51.94
ATOM	3860	CD	GLU	550	14.779	49.726	9.828	1.00	53.48
ATOM	3861	OE1	GLU	550	13.799	49.459	9.097	1.00	54.23
ATOM	3862	OE2	GLU	550	15.961	49.474	9.506	1.00	55.31
ATOM	3863	C	GLU	550	11.535	49.946	13.514	1.00	49.36
ATOM	3864	O	GLU	550	10.530	50.507	13.073	1.00	49.22
ATOM	3865	N	VAL	551	11.477	48.879	14.303	1.00	48.98
ATOM	3866	CA	VAL	551	10.199	48.310	14.707	1.00	49.91
ATOM	3867	CB	VAL	551	10.397	47.020	15.538	1.00	49.52
ATOM	3868	CG1	VAL	551	9.066	46.544	16.094	1.00	49.11
ATOM	3869	CG2	VAL	551	11.017	45.937	14.668	1.00	49.69
ATOM	3870	C	VAL	551	9.409	49.318	15.536	1.00	50.71
ATOM	3871	O	VAL	551	8.193	49.444	15.385	1.00	50.53
ATOM	3872	N	GLU	552	10.110	50.036	16.408	1.00	51.60
ATOM	3873	CA	GLU	552	9.481	51.032	17.264	1.00	52.58
ATOM	3874	CB	GLU	552	10.379	51.324	18.468	1.00	53.60
ATOM	3875	CG	GLU	552	9.753	52.241	19.503	1.00	55.39
ATOM	3876	CD	GLU	552	10.650	52.453	20.704	1.00	56.32
ATOM	3877	OE1	GLU	552	10.199	53.087	21.682	1.00	56.45
ATOM	3878	OE2	GLU	552	11.808	51.987	20.670	1.00	57.66

```
ATOM    3879  C    GLU   552      9.217  52.323  16.492  1.00 53.07
ATOM    3880  O    GLU   552      8.295  53.073  16.811  1.00 52.73
ATOM    3881  N    SER   553     10.035  52.570  15.474  1.00 52.74
ATOM    3882  CA   SER   553      9.903  53.762  14.651  1.00 53.94
ATOM    3883  CB   SER   553     11.230  54.065  13.956  1.00 54.05
ATOM    3884  OG   SER   553     12.264  54.253  14.908  1.00 56.04
ATOM    3885  C    SER   553      8.811  53.583  13.603  1.00 54.10
ATOM    3886  O    SER   553      8.314  54.556  13.034  1.00 53.78
ATOM    3887  N    GLY   554      8.439  52.333  13.356  1.00 53.73
ATOM    3888  CA   GLY   554      7.413  52.052  12.371  1.00 53.14
ATOM    3889  C    GLY   554      8.037  51.889  11.003  1.00 53.03
ATOM    3890  O    GLY   554      7.353  51.571  10.030  1.00 52.59
ATOM    3891  N    VAL   555      9.347  52.109  10.931  1.00 52.96
ATOM    3892  CA   VAL   555     10.079  51.986   9.677  1.00 52.87
ATOM    3893  CB   VAL   555     11.565  52.367   9.862  1.00 53.58
ATOM    3894  CG1  VAL   555     12.285  52.329   8.523  1.00 52.84
ATOM    3895  CG2  VAL   555     11.671  53.749  10.485  1.00 53.08
ATOM    3896  C    VAL   555      9.998  50.554   9.156  1.00 52.67
ATOM    3897  O    VAL   555      9.908  50.324   7.948  1.00 52.23
ATOM    3898  N    TYR   556     10.031  49.595  10.076  1.00 52.50
ATOM    3899  CA   TYR   556      9.960  48.183   9.719  1.00 51.70
ATOM    3900  CB   TYR   556     11.227  47.456  10.174  1.00 51.86
ATOM    3901  CG   TYR   556     11.214  45.977   9.868  1.00 51.09
ATOM    3902  CD1  TYR   556     11.254  45.519   8.552  1.00 50.94
ATOM    3903  CE1  TYR   556     11.189  44.160   8.260  1.00 51.28
ATOM    3904  CD2  TYR   556     11.113  45.034  10.892  1.00 51.14
ATOM    3905  CE2  TYR   556     11.047  43.670  10.613  1.00 50.47
ATOM    3906  CZ   TYR   556     11.083  43.241   9.295  1.00 50.81
ATOM    3907  OH   TYR   556     10.995  41.900   9.000  1.00 50.30
ATOM    3908  C    TYR   556      8.741  47.531  10.363  1.00 51.68
ATOM    3909  O    TYR   556      8.529  47.653  11.569  1.00 51.15
ATOM    3910  N    PRO   557      7.927  46.820   9.565  1.00 52.14
ATOM    3911  CD   PRO   557      6.797  46.019  10.067  1.00 52.66
ATOM    3912  CA   PRO   557      8.100  46.621   8.120  1.00 52.90
ATOM    3913  CB   PRO  -557      7.223  45.405   7.840  1.00 52.64
ATOM    3914  CG   PRO   557      6.089  45.614   8.786  1.00 52.85
ATOM    3915  C    PRO   557      7.684  47.839   7.292  1.00 53.09
ATOM    3916  O    PRO   557      6.762  48.566   7.664  1.00 53.40
ATOM    3917  N    GLY   558      8.366  48.050   6.170  1.00 53.27
ATOM    3918  CA   GLY   558      8.055  49.181   5.316  1.00 53.66
ATOM    3919  C    GLY   558      6.840  48.937   4.444  1.00 54.13
ATOM    3920  O    GLY   558      5.703  49.072   4.900  1.00 54.10
ATOM    3921  N    GLU   559      7.081  48.580   3.186  1.00 53.86
ATOM    3922  CA   GLU   559      6.001  48.309   2.245  1.00 54.22
ATOM    3923  CB   GLU   559      5.822  49.482   1.276  1.00 55.40
ATOM    3924  CG   GLU   559      4.536  49.415   0.461  1.00 56.21
ATOM    3925  CD   GLU   559      3.295  49.590   1.321  1.00 56.50
ATOM    3926  OE1  GLU   559      2.175  49.406   0.800  1.00 57.07
ATOM    3927  OE2  GLU   559      3.440  49.916   2.518  1.00 57.08
ATOM    3928  C    GLU   559      6.295  47.039   1.452  1.00 54.13
ATOM    3929  O    GLU   559      5.378  46.336   1.026  1.00 53.98
ATOM    3930  N    GLU   560      7.576  46.751   1.253  1.00 53.68
ATOM    3931  CA   GLU   560      7.977  45.560   0.515  1.00 54.17
ATOM    3932  CB   GLU   560      9.400  45.719  -0.027  1.00 54.49
ATOM    3933  CG   GLU   560      9.861  47.161  -0.132  1.00 55.28
ATOM    3934  CD   GLU   560     10.388  47.700   1.186  1.00 55.88
ATOM    3935  OE1  GLU   560     11.523  47.335   1.563  1.00 55.57
ATOM    3936  OE2  GLU   560      9.668  48.478   1.850  1.00 55.73
ATOM    3937  C    GLU   560      7.912  44.352   1.441  1.00 53.99
ATOM    3938  O    GLU   560      8.119  43.215   1.014  1.00 54.19
ATOM    3939  N    HIS   561      7.621  44.616   2.712  1.00 53.66
ATOM    3940  CA   HIS   561      7.527  43.571   3.727  1.00 53.03
ATOM    3941  CB   HIS   561      8.320  43.975   4.972  1.00 53.33
ATOM    3942  CG   HIS   561      9.687  44.507   4.676  1.00 52.71
ATOM    3943  CD2  HIS   561     10.242  45.720   4.914  1.00 52.67
ATOM    3944  ND1  HIS   561     10.662  43.755   4.057  1.00 52.82
ATOM    3945  CE1  HIS   561     11.758  44.482   3.926  1.00 53.52
ATOM    3946  NE2  HIS   561     11.529  45.677   4.439  1.00 52.58
ATOM    3947  C    HIS   561      6.073  43.340   4.124  1.00 52.40
ATOM    3948  O    HIS   561      5.783  42.508   4.983  1.00 52.28
ATOM    3949  N    SER   562      5.164  44.081   3.495  1.00 51.41
ATOM    3950  CA   SER   562      3.741  43.973   3.794  1.00 50.51
ATOM    3951  CB   SER   562      3.172  45.359   4.106  1.00 50.14
ATOM    3952  OG   SER   562      3.952  46.021   5.086  1.00 49.54
ATOM    3953  C    SER   562      2.956  43.350   2.644  1.00 50.99
ATOM    3954  O    SER   562      3.381  43.398   1.488  1.00 50.00
ATOM    3955  N    PHE   563      1.808  42.764   2.966  1.00 50.96
```

```
ATOM    3956   CA   PHE    563       0.966  42.144   1.953   1.00 51.90
ATOM    3957   CB   PHE    563       0.792  40.649   2.230   1.00 51.88
ATOM    3958   CG   PHE    563       2.085  39.889   2.291   1.00 52.62
ATOM    3959   CD1  PHE    563       2.800  39.800   3.482   1.00 52.62
ATOM    3960   CD2  PHE    563       2.598  39.274   1.154   1.00 52.42
ATOM    3961   CE1  PHE    563       4.008  39.107   3.540   1.00 53.30
ATOM    3962   CE2  PHE    563       3.805  38.580   1.200   1.00 53.30
ATOM    3963   CZ   PHE    563       4.512  38.496   2.397   1.00 53.09
ATOM    3964   C    PHE    563      -0.396  42.820   1.925   1.00 52.18
ATOM    3965   O    PHE    563      -0.847  43.371   2.930   1.00 51.96
ATOM    3966   N    HIS    564      -1.051  42.775   0.771   1.00 53.34
ATOM    3967   CA   HIS    564      -2.362  43.394   0.617   1.00 54.06
ATOM    3968   CB   HIS    564      -2.228  44.709  -0.155   1.00 54.83
ATOM    3969   CG   HIS    564      -1.305  45.696   0.493   1.00 55.50
ATOM    3970   CD2  HIS    564      -0.118  46.206   0.086   1.00 55.30
ATOM    3971   ND1  HIS    564      -1.564  46.262   1.722   1.00 55.51
ATOM    3972   CE1  HIS    564      -0.577  47.079   2.046   1.00 55.52
ATOM    3973   NE2  HIS    564       0.314  47.062   1.070   1.00 55.47
ATOM    3974   C    HIS    564      -3.315  42.457  -0.111   1.00 54.29
ATOM    3975   O    HIS    564      -4.385  42.152   0.454   1.00 54.03
ATOM    3976   OXT  HIS    564      -2.978  42.040  -1.238   1.00 55.99
ATOM    3977   C1   KPL    565       8.381  32.905  12.296   1.00 41.48
ATOM    3978   C2   KPL    565       7.795  33.008  13.719   1.00 41.70
ATOM    3979   C3   KPL    565       8.747  33.842  14.588   1.00 41.04
ATOM    3980   C4   KPL    565       6.432  33.729  13.657   1.00 42.99
ATOM    3981   O1   KPL    565       5.502  32.994  12.852   1.00 47.23
ATOM    3982   C5   KPL    565       7.641  31.587  14.333   1.00 41.12
ATOM    3983   O2   KPL    565       6.548  31.189  14.686   1.00 40.23
ATOM    3984   C6   KPL    565       8.827  30.664  14.510   1.00 39.79
ATOM    3985   O3   KPL    565       9.940  31.012  14.179   1.00 41.42
ATOM    3986   O4   KPL    565       8.649  29.440  15.040   1.00 37.97
ATOM    3987   CB   MET    601      10.230  21.149 -10.646   1.00 69.60
ATOM    3988   CG   MET    601       9.281  20.343 -11.531   1.00 71.50
ATOM    3989   SD   MET    601       7.632  21.063 -11.738   1.00 73.80
ATOM    3990   CE   MET    601       6.646  19.961 -10.716   1.00 73.00
ATOM    3991   C    MET    601       8.842  22.547  -9.089   1.00 66.93
ATOM    3992   O    MET    601       8.861  23.439  -9.940   1.00 67.03
ATOM    3993   N    MET    601       9.123  20.086  -8.698   1.00 68.90
ATOM    3994   CA   MET    601       9.767  21.337  -9.196   1.00 68.18
ATOM    3995   N    LYS    602       8.036  22.570  -8.032   1.00 64.76
ATOM    3996   CA   LYS    602       7.110  23.667  -7.796   1.00 62.08
ATOM    3997   CB   LYS    602       5.693  23.272  -8.237   1.00 63.38
ATOM    3998   CG   LYS    602       5.557  23.006  -9.732   1.00 64.55
ATOM    3999   CD   LYS    602       5.683  24.288 -10.545   1.00 65.81
ATOM    4000   CE   LYS    602       4.492  25.207 -10.311   1.00 65.96
ATOM    4001   NZ   LYS    602       4.629  26.497 -11.038   1.00 66.71
ATOM    4002   C    LYS    602       7.105  24.081  -6.322   1.00 59.15
ATOM    4003   O    LYS    602       7.250  25.263  -6.006   1.00 59.60
ATOM    4004   N    PRO    603       6.959  23.112  -5.396   1.00 55.04
ATOM    4005   CD   PRO    603       7.155  23.394  -3.964   1.00 54.14
ATOM    4006   CA   PRO    603       6.772  21.673  -5.613   1.00 51.11
ATOM    4007   CB   PRO    603       7.269  21.076  -4.303   1.00 52.30
ATOM    4008   CG   PRO    603       6.782  22.075  -3.311   1.00 53.08
ATOM    4009   C    PRO    603       5.317  21.318  -5.889   1.00 46.82
ATOM    4010   O    PRO    603       4.426  22.143  -5.704   1.00 47.26
ATOM    4011   N    THR    604       5.079  20.088  -6.329   1.00 41.84
ATOM    4012   CA   THR    604       3.727  19.639  -6.627   1.00 36.41
ATOM    4013   CB   THR    604       3.742  18.241  -7.268   1.00 36.28
ATOM    4014   OG1  THR    604       4.564  18.265  -8.440   1.00 34.78
ATOM    4015   CG2  THR    604       2.331  17.811  -7.650   1.00 35.28
ATOM    4016   C    THR    604       2.902  19.582  -5.350   1.00 33.25
ATOM    4017   O    THR    604       3.270  18.893  -4.398   1.00 31.12
ATOM    4018   N    THR    605       1.792  20.314  -5.326   1.00 30.68
ATOM    4019   CA   THR    605       0.929  20.327  -4.153   1.00 29.21
ATOM    4020   CB   THR    605       0.921  21.708  -3.465   1.00 29.89
ATOM    4021   OG1  THR    605       0.134  22.625  -4.236   1.00 30.44
ATOM    4022   CG2  THR    605       2.341  22.245  -3.336   1.00 29.99
ATOM    4023   C    THR    605      -0.505  19.970  -4.524   1.00 27.07
ATOM    4024   O    THR    605      -0.823  19.779  -5.700   1.00 25.26
ATOM    4025   N    ILE    606      -1.358  19.885  -3.508   1.00 24.97
ATOM    4026   CA   ILE    606      -2.767  19.551  -3.684   1.00 24.26
ATOM    4027   CB   ILE    606      -3.495  19.497  -2.318   1.00 26.83
ATOM    4028   CG2  ILE    606      -4.942  19.052  -2.510   1.00 24.52
ATOM    4029   CG1  ILE    606      -2.767  18.531  -1.381   1.00 28.76
ATOM    4030   CD1  ILE    606      -3.204  18.634   0.077   1.00 32.70
ATOM    4031   C    ILE    606      -3.459  20.593  -4.558   1.00 22.72
ATOM    4032   O    ILE    606      -4.297  20.259  -5.397   1.00 21.59
```

```
ATOM   4033  N    SER  607     -3.095  21.854  -4.359  1.00 21.35
ATOM   4034  CA   SER  607     -3.691  22.947  -5.113  1.00 21.40
ATOM   4035  CB   SER  607     -3.042  24.271  -4.712  1.00 23.61
ATOM   4036  OG   SER  607     -3.247  24.522  -3.332  1.00 30.17
ATOM   4037  C    SER  607     -3.552  22.744  -6.618  1.00 20.50
ATOM   4038  O    SER  607     -4.427  23.140  -7.390  1.00 19.39
ATOM   4039  N    LEU  608     -2.448  22.129  -7.025  1.00 20.28
ATOM   4040  CA   LEU  608     -2.194  21.879  -8.437  1.00 20.79
ATOM   4041  CB   LEU  608     -0.773  21.349  -8.636  1.00 22.00
ATOM   4042  CG   LEU  608      0.040  21.923  -9.802  1.00 25.44
ATOM   4043  CD1  LEU  608      1.261  21.050 -10.024  1.00 26.12
ATOM   4044  CD2  LEU  608     -0.794  21.996 -11.055  1.00 26.06
ATOM   4045  C    LEU  608     -3.196  20.859  -8.979  1.00 18.78
ATOM   4046  O    LEU  608     -3.749  21.022 -10.068  1.00 16.08
ATOM   4047  N    LEU  609     -3.425  19.799  -8.216  1.00 16.93
ATOM   4048  CA   LEU  609     -4.355  18.770  -8.645  1.00 15.90
ATOM   4049  CB   LEU  609     -4.284  17.564  -7.715  1.00 14.64
ATOM   4050  CG   LEU  609     -2.919  16.894  -7.626  1.00 16.05
ATOM   4051  CD1  LEU  609     -3.088  15.620  -6.811  1.00 14.29
ATOM   4052  CD2  LEU  609     -2.367  16.582  -9.012  1.00 14.89
ATOM   4053  C    LEU  609     -5.776  19.302  -8.684  1.00 15.23
ATOM   4054  O    LEU  609     -6.549  18.943  -9.564  1.00 16.80
ATOM   4055  N    GLN  610     -6.120  20.157  -7.727  1.00 16.25
ATOM   4056  CA   GLN  610     -7.454  20.734  -7.688  1.00 18.78
ATOM   4057  CB   GLN  610     -7.610  21.601  -6.431  1.00 22.10
ATOM   4058  CG   GLN  610     -9.015  22.149  -6.168  1.00 22.61
ATOM   4059  CD   GLN  610    -10.087  21.070  -6.066  1.00 25.18
ATOM   4060  OE1  GLN  610    -10.864  20.862  -7.000  1.00 25.07
ATOM   4061  NE2  GLN  610    -10.135  20.380  -4.930  1.00 23.46
ATOM   4062  C    GLN  610     -7.606  21.564  -8.962  1.00 19.36
ATOM   4063  O    GLN  610     -8.674  21.599  -9.567  1.00 20.25
ATOM   4064  N    LYS  611     -6.518  22.203  -9.380  1.00 17.95
ATOM   4065  CA   LYS  611     -6.527  23.011 -10.591  1.00 19.00
ATOM   4066  CB   LYS  611     -5.237  23.829 -10.694  1.00 19.60
ATOM   4067  CG   LYS  611     -5.135  24.652 -11.967  1.00 26.12
ATOM   4068  CD   LYS  611     -3.929  25.572 -11.947  1.00 30.05
ATOM   4069  CE   LYS  611     -4.051  26.611 -10.841  1.00 33.03
ATOM   4070  NZ   LYS  611     -2.950  27.626 -10.883  1.00 36.49
ATOM   4071  C    LYS  611     -6.684  22.119 -11.825  1.00 18.37
ATOM   4072  O    LYS  611     -7.438  22.443 -12.743  1.00 17.92
ATOM   4073  N    TYR  612     -5.969  21.000 -11.853  1.00 17.93
ATOM   4074  CA   TYR  612     -6.069  20.072 -12.974  1.00 17.14
ATOM   4075  CB   TYR  612     -5.137  18.873 -12.757  1.00 18.22
ATOM   4076  CG   TYR  612     -3.674  19.182 -13.000  1.00 20.39
ATOM   4077  CD1  TYR  612     -2.672  18.314 -12.568  1.00 20.70
ATOM   4078  CE1  TYR  612     -1.325  18.591 -12.819  1.00 22.32
ATOM   4079  CD2  TYR  612     -3.292  20.335 -13.686  1.00 20.10
ATOM   4080  CE2  TYR  612     -1.952  20.618 -13.941  1.00 22.45
ATOM   4081  CZ   TYR  612     -0.978  19.745 -13.507  1.00 20.89
ATOM   4082  OH   TYR  612      0.343  20.026 -13.781  1.00 24.80
ATOM   4083  C    TYR  612     -7.501  19.586 -13.165  1.00 16.86
ATOM   4084  O    TYR  612     -7.942  19.383 -14.295  1.00 17.28
ATOM   4085  N    LYS  613     -8.233  19.390 -12.068  1.00 16.32
ATOM   4086  CA   LYS  613     -9.618  18.935 -12.192  1.00 15.88
ATOM   4087  CB   LYS  613    -10.229  18.609 -10.821  1.00 14.30
ATOM   4088  CG   LYS  613    -11.689  18.175 -10.928  1.00 17.16
ATOM   4089  CD   LYS  613    -12.164  17.374  -9.723  1.00 17.49
ATOM   4090  CE   LYS  613    -13.620  16.936  -9.921  1.00 18.61
ATOM   4091  NZ   LYS  613    -14.048  15.860  -8.988  1.00 17.77
ATOM   4092  C    LYS  613    -10.422  20.045 -12.869  1.00 16.11
ATOM   4093  O    LYS  613    -11.313  19.786 -13.676  1.00 16.71
ATOM   4094  N    GLN  614    -10.087  21.285 -12.523  1.00 17.86
ATOM   4095  CA   GLN  614    -10.736  22.457 -13.099  1.00 18.80
ATOM   4096  CB   GLN  614    -10.097  23.740 -12.558  1.00 21.10
ATOM   4097  CG   GLN  614    -10.022  23.863 -11.039  1.00 30.74
ATOM   4098  CD   GLN  614     -9.094  24.991 -10.574  1.00 35.26
ATOM   4099  OE1  GLN  614     -8.799  25.925 -11.331  1.00 37.92
ATOM   4100  NE2  GLN  614     -8.645  24.916  -9.315  1.00 33.37
ATOM   4101  C    GLN  614    -10.534  22.416 -14.613  1.00 17.17
ATOM   4102  O    GLN  614    -11.455  22.671 -15.390  1.00 18.11
ATOM   4103  N    GLU  615     -9.314  22.085 -15.016  1.00 16.94
ATOM   4104  CA   GLU  615     -8.945  22.027 -16.426  1.00 16.23
ATOM   4105  CB   GLU  615     -7.451  22.331 -16.557  1.00 16.41
ATOM   4106  CG   GLU  615     -7.071  23.645 -15.899  1.00 16.28
ATOM   4107  CD   GLU  615     -5.579  23.851 -15.792  1.00 16.90
ATOM   4108  OE1  GLU  615     -4.826  22.881 -16.002  1.00 20.30
ATOM   4109  OE2  GLU  615     -5.150  24.981 -15.478  1.00 17.87
```

ATOM	4110	C	GLU	615	-9.277	20.707	-17.115	1.00	16.72
ATOM	4111	O	GLU	615	-9.025	20.543	-18.310	1.00	16.29
ATOM	4112	N	LYS	616	-9.869	19.778	-16.371	1.00	17.52
ATOM	4113	CA	LYS	616	-10.210	18.460	-16.915	1.00	20.17
ATOM	4114	CB	LYS	616	-11.254	18.567	-18.027	1.00	23.07
ATOM	4115	CG	LYS	616	-12.604	19.120	-17.606	1.00	29.30
ATOM	4116	CD	LYS	616	-13.410	18.131	-16.789	1.00	32.57
ATOM	4117	CE	LYS	616	-14.817	18.660	-16.536	1.00	33.31
ATOM	4118	NZ	LYS	616	-15.508	18.981	-17.807	1.00	38.09
ATOM	4119	C	LYS	616	-8.950	17.815	-17.475	1.00	21.00
ATOM	4120	O	LYS	616	-8.993	17.058	-18.455	1.00	21.94
ATOM	4121	N	LYS	617	-7.818	18.138	-16.864	1.00	18.27
ATOM	4122	CA	LYS	617	-6.557	17.569	-17.298	1.00	17.56
ATOM	4123	CB	LYS	617	-5.427	18.592	-17.183	1.00	20.70
ATOM	4124	CG	LYS	617	-4.111	18.075	-17.736	1.00	23.47
ATOM	4125	CD	LYS	617	-2.959	18.959	-17.311	1.00	27.46
ATOM	4126	CE	LYS	617	-3.104	20.376	-17.847	1.00	28.51
ATOM	4127	NZ	LYS	617	-2.146	21.290	-17.160	1.00	31.20
ATOM	4128	C	LYS	617	-6.266	16.375	-16.399	1.00	16.64
ATOM	4129	O	LYS	617	-5.821	16.535	-15.263	1.00	14.57
ATOM	4130	N	ARG	618	-6.536	15.180	-16.910	1.00	16.67
ATOM	4131	CA	ARG	618	-6.320	13.957	-16.149	1.00	14.83
ATOM	4132	CB	ARG	618	-6.910	12.773	-16.921	1.00	15.62
ATOM	4133	CG	ARG	618	-8.434	12.769	-16.882	1.00	18.58
ATOM	4134	CD	ARG	618	-9.058	11.769	-17.852	1.00	23.21
ATOM	4135	NE	ARG	618	-8.928	12.221	-19.232	1.00	26.25
ATOM	4136	CZ	ARG	618	-9.601	11.709	-20.258	1.00	27.82
ATOM	4137	NH1	ARG	618	-10.458	10.716	-20.060	1.00	27.55
ATOM	4138	NH2	ARG	618	-9.421	12.201	-21.480	1.00	25.20
ATOM	4139	C	ARG	618	-4.838	13.767	-15.865	1.00	15.48
ATOM	4140	O	ARG	618	-3.999	13.923	-16.748	1.00	16.70
ATOM	4141	N	PHE	619	-4.519	13.432	-14.619	1.00	14.70
ATOM	4142	CA	PHE	619	-3.131	13.280	-14.213	1.00	13.63
ATOM	4143	CB	PHE	619	-2.797	14.341	-13.158	1.00	14.26
ATOM	4144	CG	PHE	619	-3.688	14.296	-11.951	1.00	15.87
ATOM	4145	CD1	PHE	619	-3.411	13.431	-10.894	1.00	14.85
ATOM	4146	CD2	PHE	619	-4.816	15.109	-11.875	1.00	17.83
ATOM	4147	CE1	PHE	619	-4.244	13.374	-9.778	1.00	14.51
ATOM	4148	CE2	PHE	619	-5.657	15.062	-10.764	1.00	17.27
ATOM	4149	CZ	PHE	619	-5.370	14.191	-9.711	1.00	15.64
ATOM	4150	C	PHE	619	-2.815	11.896	-13.671	1.00	15.10
ATOM	4151	O	PHE	619	-3.660	11.258	-13.051	1.00	14.55
ATOM	4152	N	ALA	620	-1.586	11.451	-13.903	1.00	13.79
ATOM	4153	CA	ALA	620	-1.144	10.144	-13.440	1.00	14.57
ATOM	4154	CB	ALA	620	-0.186	9.529	-14.460	1.00	14.31
ATOM	4155	C	ALA	620	-0.482	10.194	-12.067	1.00	14.58
ATOM	4156	O	ALA	620	0.149	11.185	-11.687	1.00	13.79
ATOM	4157	N	THR	621	-0.646	9.106	-11.322	1.00	12.87
ATOM	4158	CA	THR	621	-0.073	8.962	-9.994	1.00	14.62
ATOM	4159	CB	THR	621	-1.145	9.145	-8.912	1.00	18.68
ATOM	4160	OG1	THR	621	-1.660	10.482	-8.982	1.00	22.56
ATOM	4161	CG2	THR	621	-0.567	8.893	-7.550	1.00	25.02
ATOM	4162	C	THR	621	0.457	7.538	-9.925	1.00	13.44
ATOM	4163	O	THR	621	-0.023	6.658	-10.643	1.00	13.17
ATOM	4164	N	ILE	622	1.428	7.296	-9.059	1.00	14.11
ATOM	4165	CA	ILE	622	1.984	5.958	-8.979	1.00	14.52
ATOM	4166	CB	ILE	622	3.165	5.825	-9.985	1.00	16.11
ATOM	4167	CG2	ILE	622	4.372	6.630	-9.495	1.00	19.85
ATOM	4168	CG1	ILE	622	3.500	4.352	-10.204	1.00	19.83
ATOM	4169	CD1	ILE	622	4.468	4.118	-11.347	1.00	22.61
ATOM	4170	C	ILE	622	2.443	5.606	-7.570	1.00	13.66
ATOM	4171	O	ILE	622	2.596	6.481	-6.735	1.00	12.92
ATOM	4172	N	THR	623	2.611	4.317	-7.295	1.00	15.34
ATOM	4173	CA	THR	623	3.080	3.914	-5.979	1.00	16.08
ATOM	4174	CB	THR	623	2.611	2.491	-5.595	1.00	16.42
ATOM	4175	OG1	THR	623	3.187	1.540	-6.498	1.00	19.41
ATOM	4176	CG2	THR	623	1.090	2.390	-5.656	1.00	19.47
ATOM	4177	C	THR	623	4.602	3.910	-6.063	1.00	14.73
ATOM	4178	O	THR	623	5.162	3.799	-7.150	1.00	14.80
ATOM	4179	N	ALA	624	5.260	4.030	-4.913	1.00	14.62
ATOM	4180	CA	ALA	624	6.719	4.024	-4.826	1.00	14.05
ATOM	4181	CB	ALA	624	7.282	5.398	-5.187	1.00	13.19
ATOM	4182	C	ALA	624	7.081	3.680	-3.384	1.00	14.67
ATOM	4183	O	ALA	624	6.417	4.135	-2.452	1.00	14.07
ATOM	4184	N	TYR	625	8.126	2.885	-3.186	1.00	14.04
ATOM	4185	CA	TYR	625	8.504	2.522	-1.830	1.00	13.33
ATOM	4186	CB	TYR	625	7.992	1.125	-1.478	1.00	13.65

```
ATOM    4187  CG   TYR   625      6.658   0.790  -2.089  1.00 11.16
ATOM    4188  CD1  TYR   625      6.587   0.065  -3.277  1.00 13.08
ATOM    4189  CE1  TYR   625      5.367  -0.253  -3.852  1.00 12.70
ATOM    4190  CD2  TYR   625      5.467   1.199  -1.488  1.00 11.45
ATOM    4191  CE2  TYR   625      4.234   0.886  -2.057  1.00 11.45
ATOM    4192  CZ   TYR   625      4.194   0.155  -3.241  1.00 11.70
ATOM    4193  OH   TYR   625      2.993  -0.200  -3.795  1.00 13.12
ATOM    4194  C    TYR   625      9.999   2.555  -1.624  1.00 14.79
ATOM    4195  O    TYR   625     10.500   2.009  -0.640  1.00 12.38
ATOM    4196  N    ASP   626     10.721   3.177  -2.549  1.00 14.45
ATOM    4197  CA   ASP   626     12.166   3.263  -2.410  1.00 16.17
ATOM    4198  CB   ASP   626     12.837   1.949  -2.862  1.00 18.23
ATOM    4199  CG   ASP   626     12.721   1.703  -4.362  1.00 19.53
ATOM    4200  OD1  ASP   626     13.387   2.419  -5.136  1.00 19.59
ATOM    4201  OD2  ASP   626     11.964   0.792  -4.764  1.00 21.03
ATOM    4202  C    ASP   626     12.746   4.454  -3.159  1.00 16.01
ATOM    4203  O    ASP   626     12.091   5.068  -4.009  1.00 15.86
ATOM    4204  N    TYR   627     13.989   4.771  -2.826  1.00 15.06
ATOM    4205  CA   TYR   627     14.695   5.896  -3.419  1.00 15.15
ATOM    4206  CB   TYR   627     16.058   6.039  -2.745  1.00 16.61
ATOM    4207  CG   TYR   627     16.991   7.003  -3.440  1.00 17.55
ATOM    4208  CD1  TYR   627     17.025   8.351  -3.089  1.00 17.88
ATOM    4209  CE1  TYR   627     17.901   9.237  -3.714  1.00 18.86
ATOM    4210  CD2  TYR   627     17.854   6.561  -4.441  1.00 18.63
ATOM    4211  CE2  TYR   627     18.728   7.435  -5.073  1.00 20.28
ATOM    4212  CZ   TYR   627     18.746   8.763  -4.703  1.00 21.00
ATOM    4213  OH   TYR   627     19.624   9.615  -5.330  1.00 23.89
ATOM    4214  C    TYR   627     14.892   5.816  -4.929  1.00 15.66
ATOM    4215  O    TYR   627     14.681   6.797  -5.635  1.00 15.39
ATOM    4216  N    SER   628     15.300   4.653  -5.422  1.00 15.60
ATOM    4217  CA   SER   628     15.568   4.504  -6.842  1.00 16.14
ATOM    4218  CB   SER   628     16.196   3.139  -7.111  1.00 16.61
ATOM    4219  OG   SER   628     17.466   3.068  -6.473  1.00 18.25
ATOM    4220  C    SER   628     14.367   4.733  -7.746  1.00 16.64
ATOM    4221  O    SER   628     14.448   5.505  -8.702  1.00 14.62
ATOM    4222  N    PHE   629     13.249   4.081  -7.462  1.00 16.10
ATOM    4223  CA   PHE   629     12.090   4.303  -8.307  1.00 15.35
ATOM    4224  CB   PHE   629     11.032   3.225  -8.069  1.00 15.85
ATOM    4225  CG   PHE   629     11.350   1.934  -8.769  1.00 16.27
ATOM    4226  CD1  PHE   629     12.022   0.910  -8.108  1.00 15.67
ATOM    4227  CD2  PHE   629     11.039   1.774 -10.118  1.00 14.97
ATOM    4228  CE1  PHE   629     12.381  -0.261  -8.781  1.00 16.45
ATOM    4229  CE2  PHE   629     11.391   0.616 -10.803  1.00 15.51
ATOM    4230  CZ   PHE   629     12.066  -0.408 -10.137  1.00 15.52
ATOM    4231  C    PHE   629     11.526   5.712  -8.131  1.00 15.42
ATOM    4232  O    PHE   629     11.149   6.362  -9.110  1.00 14.31
ATOM    4233  N    ALA   630     11.509   6.210  -6.900  1.00 13.96
ATOM    4234  CA   ALA   630     10.998   7.554  -6.654  1.00 13.58
ATOM    4235  CB   ALA   630     11.058   7.872  -5.164  1.00 15.22
ATOM    4236  C    ALA   630     11.800   8.585  -7.447  1.00 14.75
ATOM    4237  O    ALA   630     11.240   9.526  -8.024  1.00 14.71
ATOM    4238  N    LYS   631     13.115   8.408  -7.467  1.00 15.76
ATOM    4239  CA   LYS   631     14.011   9.312  -8.193  1.00 17.34
ATOM    4240  CB   LYS   631     15.465   8.898  -7.923  1.00 17.65
ATOM    4241  CG   LYS   631     16.529   9.653  -8.706  1.00 23.27
ATOM    4242  CD   LYS   631     16.611  11.105  -8.294  1.00 24.41
ATOM    4243  CE   LYS   631     17.957  11.707  -8.699  1.00 28.34
ATOM    4244  NZ   LYS   631     18.224  11.574 -10.164  1.00 29.72
ATOM    4245  C    LYS   631     13.703   9.244  -9.689  1.00 16.69
ATOM    4246  O    LYS   631     13.628  10.269 -10.375  1.00 17.77
ATOM    4247  N    LEU   632     13.527   8.028 -10.193  1.00 15.74
ATOM    4248  CA   LEU   632     13.224   7.828 -11.606  1.00 14.84
ATOM    4249  CB   LEU   632     13.153   6.334 -11.916  1.00 15.29
ATOM    4250  CG   LEU   632     13.100   5.918 -13.390  1.00 14.76
ATOM    4251  CD1  LEU   632     13.590   4.496 -13.492  1.00 13.45
ATOM    4252  CD2  LEU   632     11.689   6.064 -13.954  1.00 14.18
ATOM    4253  C    LEU   632     11.909   8.503 -11.997  1.00 16.72
ATOM    4254  O    LEU   632     11.834   9.159 -13.035  1.00 15.36
ATOM    4255  N    PHE   633     10.872   8.335 -11.177  1.00 15.97
ATOM    4256  CA   PHE   633      9.581   8.942 -11.477  1.00 17.44
ATOM    4257  CB   PHE   633      8.497   8.463 -10.493  1.00 16.12
ATOM    4258  CG   PHE   633      8.333   6.958 -10.425  1.00 17.21
ATOM    4259  CD1  PHE   633      8.562   6.156 -11.542  1.00 18.33
ATOM    4260  CD2  PHE   633      7.921   6.350  -9.240  1.00 18.31
ATOM    4261  CE1  PHE   633      8.386   4.763 -11.483  1.00 17.53
ATOM    4262  CE2  PHE   633      7.739   4.966  -9.167  1.00 14.83
ATOM    4263  CZ   PHE   633      7.974   4.171 -10.291  1.00 18.33
```

```
ATOM    4264  C    PHE    633        9.683   10.464  -11.409   1.00  19.16
ATOM    4265  O    PHE    633        9.128   11.173  -12.251   1.00  20.23
ATOM    4266  N    ALA    634       10.390   10.964  -10.402   1.00  18.95
ATOM    4267  CA   ALA    634       10.561   12.402  -10.235   1.00  20.80
ATOM    4268  CB   ALA    634       11.315   12.697   -8.941   1.00  22.92
ATOM    4269  C    ALA    634       11.314   12.996  -11.423   1.00  21.47
ATOM    4270  O    ALA    634       10.970   14.073  -11.903   1.00  21.11
ATOM    4271  N    ASP    635       12.339   12.296  -11.898   1.00  21.14
ATOM    4272  CA   ASP    635       13.113   12.792  -13.030   1.00  23.15
ATOM    4273  CB   ASP    635       14.366   11.943  -13.249   1.00  24.84
ATOM    4274  CG   ASP    635       15.388   12.102  -12.141   1.00  24.40
ATOM    4275  OD1  ASP    635       15.242   13.015  -11.300   1.00  27.97
ATOM    4276  OD2  ASP    635       16.349   11.311  -12.127   1.00  26.01
ATOM    4277  C    ASP    635       12.319   12.844  -14.338   1.00  23.85
ATOM    4278  O    ASP    635       12.662   13.606  -15.247   1.00  23.95
ATOM    4279  N    GLU    636       11.269   12.034  -14.434   1.00  22.21
ATOM    4280  CA   GLU    636       10.432   11.986  -15.629   1.00  22.88
ATOM    4281  CB   GLU    636        9.971   10.555  -15.899   1.00  22.80
ATOM    4282  CG   GLU    636       11.087    9.593  -16.233   1.00  24.66
ATOM    4283  CD   GLU    636       11.863   10.024  -17.459   1.00  25.48
ATOM    4284  OE1  GLU    636       11.236   10.200  -18.523   1.00  28.84
ATOM    4285  OE2  GLU    636       13.092   10.186  -17.359   1.00  26.19
ATOM    4286  C    GLU    636        9.203   12.879  -15.543   1.00  21.66
ATOM    4287  O    GLU    636        8.483   13.035  -16.528   1.00  22.31
ATOM    4288  N    GLY    637        8.939   13.435  -14.365   1.00  20.53
ATOM    4289  CA   GLY    637        7.789   14.308  -14.223   1.00  20.79
ATOM    4290  C    GLY    637        6.590   13.755  -13.472   1.00  21.60
ATOM    4291  O    GLY    637        5.582   14.452  -13.348   1.00  22.27
ATOM    4292  N    LEU    638        6.680   12.511  -13.000   1.00  21.20
ATOM    4293  CA   LEU    638        5.599   11.891  -12.228   1.00  22.21
ATOM    4294  CB   LEU    638        5.683   10.361  -12.301   1.00  23.81
ATOM    4295  CG   LEU    638        4.426    9.629  -12.774   1.00  26.98
ATOM    4296  CD1  LEU    638        4.678    8.133  -12.758   1.00  25.19
ATOM    4297  CD2  LEU    638        3.241    9.988  -11.903   1.00  27.34
ATOM    4298  C    LEU    638        5.876   12.355  -10.807   1.00  20.11
ATOM    4299  O    LEU    638        6.683   11.752  -10.094   1.00  22.26
ATOM    4300  N    ASN    639        5.203   13.427  -10.409   1.00  20.38
ATOM    4301  CA   ASN    639        5.415   14.035   -9.105   1.00  18.91
ATOM    4302  CB   ASN    639        5.557   15.555   -9.264   1.00  24.25
ATOM    4303  CG   ASN    639        6.571   15.944  -10.327   1.00  28.84
ATOM    4304  OD1  ASN    639        7.684   15.416  -10.361   1.00  31.74
ATOM    4305  ND2  ASN    639        6.195   16.881  -11.194   1.00  31.59
ATOM    4306  C    ASN    639        4.348   13.747   -8.054   1.00  17.68
ATOM    4307  O    ASN    639        4.240   14.470   -7.061   1.00  16.28
ATOM    4308  N    VAL    640        3.547   12.711   -8.265   1.00  16.43
ATOM    4309  CA   VAL    640        2.518   12.366   -7.289   1.00  15.98
ATOM    4310  CB   VAL    640        1.101   12.590   -7.840   1.00  16.39
ATOM    4311  CG1  VAL    640        0.083   12.203   -6.787   1.00  18.52
ATOM    4312  CG2  VAL    640        0.917   14.054   -8.224   1.00  18.53
ATOM    4313  C    VAL    640        2.712   10.895   -6.973   1.00  15.29
ATOM    4314  O    VAL    640        2.445   10.036   -7.811   1.00  11.74
ATOM    4315  N    MET    641        3.190   10.618   -5.764   1.00  13.95
ATOM    4316  CA   MET    641        3.477    9.252   -5.362   1.00  14.10
ATOM    4317  CB   MET    641        4.989    9.052   -5.237   1.00  14.03
ATOM    4318  CG   MET    641        5.725    9.242   -6.546   1.00  18.23
ATOM    4319  SD   MET    641        7.481    9.167   -6.340   1.00  18.97
ATOM    4320  CE   MET    641        8.019   10.537   -7.397   1.00  20.65
ATOM    4321  C    MET    641        2.815    8.827   -4.076   1.00  12.89
ATOM    4322  O    MET    641        2.704    9.599   -3.127   1.00  16.15
ATOM    4323  N    LEU    642        2.405    7.569   -4.041   1.00  13.58
ATOM    4324  CA   LEU    642        1.743    7.045   -2.865   1.00  15.28
ATOM    4325  CB   LEU    642        0.330    6.602   -3.257   1.00  19.13
ATOM    4326  CG   LEU    642       -0.652    5.954   -2.276   1.00  23.45
ATOM    4327  CD1  LEU    642       -0.395    4.474   -2.248   1.00  25.41
ATOM    4328  CD2  LEU    642       -0.555    6.576   -0.881   1.00  22.82
ATOM    4329  C    LEU    642        2.533    5.908   -2.230   1.00  15.23
ATOM    4330  O    LEU    642        2.920    4.947   -2.898   1.00  15.25
ATOM    4331  N    VAL    643        2.782    6.053   -0.933   1.00  16.09
ATOM    4332  CA   VAL    643        3.478    5.037   -0.155   1.00  16.71
ATOM    4333  CB   VAL    643        4.389    5.668    0.917   1.00  15.65
ATOM    4334  CG1  VAL    643        5.181    4.576    1.632   1.00  17.25
ATOM    4335  CG2  VAL    643        5.351    6.663    0.261   1.00  20.05
ATOM    4336  C    VAL    643        2.327    4.297    0.508   1.00  15.14
ATOM    4337  O    VAL    643        1.931    4.624    1.624   1.00  15.03
ATOM    4338  N    GLY    644        1.784    3.313   -0.206   1.00  18.13
ATOM    4339  CA   GLY    644        0.646    2.565    0.288   1.00  16.80
ATOM    4340  C    GLY    644        0.948    1.249    0.963   1.00  16.33
```

```
ATOM   4341  O    GLY   644       2.038   0.698   0.802  1.00 15.86
ATOM   4342  N    ASP   645      -0.020   0.735   1.717  1.00 15.60
ATOM   4343  CA   ASP   645       0.200  -0.529   2.411  1.00 16.74
ATOM   4344  CB   ASP   645      -0.837  -0.755   3.521  1.00 15.16
ATOM   4345  CG   ASP   645      -2.268  -0.790   3.017  1.00 16.47
ATOM   4346  OD1  ASP   645      -2.499  -0.772   1.794  1.00 12.97
ATOM   4347  OD2  ASP   645      -3.178  -0.843   3.875  1.00 16.97
ATOM   4348  C    ASP   645       0.258  -1.703   1.446  1.00 15.61
ATOM   4349  O    ASP   645       0.406  -2.856   1.860  1.00 18.52
ATOM   4350  N    SER   646       0.169  -1.399   0.151  1.00 14.45
ATOM   4351  CA   SER   646       0.283  -2.425  -0.879  1.00 12.93
ATOM   4352  CB   SER   646       0.062  -1.821  -2.266  1.00 14.70
ATOM   4353  OG   SER   646       0.943  -0.726  -2.478  1.00 16.74
ATOM   4354  C    SER   646       1.695  -2.994  -0.801  1.00 13.99
ATOM   4355  O    SER   646       1.969  -4.085  -1.308  1.00 15.91
ATOM   4356  N    LEU   647       2.596  -2.248  -0.170  1.00 11.90
ATOM   4357  CA   LEU   647       3.977  -2.702  -0.031  1.00 12.24
ATOM   4358  CB   LEU   647       4.839  -1.599   0.601  1.00 12.62
ATOM   4359  CG   LEU   647       4.542  -1.162   2.038  1.00 13.54
ATOM   4360  CD1  LEU   647       5.201  -2.120   3.026  1.00 15.69
ATOM   4361  CD2  LEU   647       5.062   0.254   2.247  1.00 14.93
ATOM   4362  C    LEU   647       4.015  -3.975   0.818  1.00 12.53
ATOM   4363  O    LEU   647       4.983  -4.728   0.765  1.00 13.66
ATOM   4364  N    GLY   648       2.954  -4.216   1.586  1.00 12.76
ATOM   4365  CA   GLY   648       2.910  -5.410   2.417  1.00 12.76
ATOM   4366  C    GLY   648       2.941  -6.654   1.554  1.00 13.52
ATOM   4367  O    GLY   648       3.395  -7.720   1.973  1.00 12.64
ATOM   4368  N    MET   649       2.456  -6.510   0.328  1.00 13.40
ATOM   4369  CA   MET   649       2.434  -7.615  -0.611  1.00 13.82
ATOM   4370  CB   MET   649       1.068  -7.672  -1.307  1.00 15.15
ATOM   4371  CG   MET   649      -0.080  -7.870  -0.326  1.00 19.61
ATOM   4372  SD   MET   649      -1.749  -7.781  -1.021  1.00 23.07
ATOM   4373  CE   MET   649      -1.676  -9.060  -2.275  1.00 19.40
ATOM   4374  C    MET   649       3.563  -7.497  -1.631  1.00 14.32
ATOM   4375  O    MET   649       4.352  -8.418  -1.802  1.00 13.75
ATOM   4376  N    THR   650       3.678  -6.353  -2.290  1.00 12.15
ATOM   4377  CA   THR   650       4.717  -6.216  -3.303  1.00 13.72
ATOM   4378  CB   THR   650       4.416  -5.015  -4.221  1.00 15.77
ATOM   4379  OG1  THR   650       4.506  -3.803  -3.475  1.00 21.01
ATOM   4380  CG2  THR   650       3.011  -5.143  -4.785  1.00 15.50
ATOM   4381  C    THR   650       6.144  -6.135  -2.776  1.00 12.32
ATOM   4382  O    THR   650       7.089  -6.565  -3.445  1.00 11.07
ATOM   4383  N    VAL   651       6.310  -5.595  -1.576  1.00 11.93
ATOM   4384  CA   VAL   651       7.645  -5.477  -0.995  1.00 12.05
ATOM   4385  CB   VAL   651       7.845  -4.079  -0.358  1.00 12.18
ATOM   4386  CG1  VAL   651       9.211  -3.993   0.316  1.00 13.43
ATOM   4387  CG2  VAL   651       7.711  -3.005  -1.423  1.00 13.62
ATOM   4388  C    VAL   651       7.895  -6.557   0.057  1.00 11.83
ATOM   4389  O    VAL   651       8.858  -7.316  -0.035  1.00 12.12
ATOM   4390  N    GLN   652       7.018  -6.640   1.049  1.00 12.39
ATOM   4391  CA   GLN   652       7.204  -7.615   2.123  1.00 13.70
ATOM   4392  CB   GLN   652       6.420  -7.177   3.350  1.00 13.40
ATOM   4393  CG   GLN   652       6.796  -5.783   3.818  1.00 13.66
ATOM   4394  CD   GLN   652       6.004  -5.362   5.028  1.00 13.82
ATOM   4395  OE1  GLN   652       4.978  -5.962   5.340  1.00 14.37
ATOM   4396  NE2  GLN   652       6.464  -4.319   5.713  1.00  9.59
ATOM   4397  C    GLN   652       6.845  -9.053   1.770  1.00 13.88
ATOM   4398  O    GLN   652       7.356  -9.982   2.388  1.00 14.21
ATOM   4399  N    GLY   653       5.957  -9.239   0.799  1.00 12.48
ATOM   4400  CA   GLY   653       5.595 -10.590   0.408  1.00 14.75
ATOM   4401  C    GLY   653       4.474 -11.249   1.193  1.00 14.96
ATOM   4402  O    GLY   653       4.323 -12.468   1.144  1.00 14.96
ATOM   4403  N    HIS   654       3.693 -10.461   1.924  1.00 14.70
ATOM   4404  CA   HIS   654       2.572 -11.008   2.678  1.00 18.41
ATOM   4405  CB   HIS   654       2.150 -10.052   3.792  1.00 15.90
ATOM   4406  CG   HIS   654       3.191  -9.857   4.844  1.00 17.16
ATOM   4407  CD2  HIS   654       3.830  -8.740   5.265  1.00 12.42
ATOM   4408  ND1  HIS   654       3.677 -10.892   5.614  1.00 15.54
ATOM   4409  CE1  HIS   654       4.571 -10.421   6.463  1.00 17.70
ATOM   4410  NE2  HIS   654       4.683  -9.118   6.272  1.00 15.36
ATOM   4411  C    HIS   654       1.387 -11.248   1.745  1.00 18.82
ATOM   4412  O    HIS   654       1.349 -10.723   0.631  1.00 20.21
ATOM   4413  N    ASP   655       0.420 -12.034   2.216  1.00 19.49
ATOM   4414  CA   ASP   655      -0.769 -12.374   1.436  1.00 20.72
ATOM   4415  CB   ASP   655      -1.406 -13.663   1.978  1.00 25.65
ATOM   4416  CG   ASP   655      -2.228 -13.426   3.234  1.00 28.75
ATOM   4417  OD1  ASP   655      -3.324 -12.830   3.133  1.00 36.14
```

```
ATOM   4418  OD2 ASP   655    -1.789 -13.825    4.330  1.00 34.78
ATOM   4419  C   ASP   655    -1.815 -11.263    1.458  1.00 19.20
ATOM   4420  O   ASP   655    -2.805 -11.320    0.729  1.00 20.52
ATOM   4421  N   SER   656    -1.610 -10.267    2.310  1.00 16.01
ATOM   4422  CA  SER   656    -2.545  -9.149    2.407  1.00 14.62
ATOM   4423  CB  SER   656    -3.663  -9.467    3.402  1.00 14.60
ATOM   4424  OG  SER   656    -3.203  -9.327    4.731  1.00 13.62
ATOM   4425  C   SER   656    -1.771  -7.940    2.897  1.00 11.97
ATOM   4426  O   SER   656    -0.579  -8.031    3.185  1.00 11.43
ATOM   4427  N   THR   657    -2.447  -6.801    2.993  1.00 13.16
ATOM   4428  CA  THR   657    -1.801  -5.578    3.461  1.00 12.70
ATOM   4429  CB  THR   657    -2.433  -4.325    2.799  1.00 14.37
ATOM   4430  OG1 THR   657    -3.782  -4.183    3.240  1.00 14.29
ATOM   4431  CG2 THR   657    -2.421  -4.441    1.279  1.00 16.57
ATOM   4432  C   THR   657    -1.852  -5.394    4.980  1.00 12.71
ATOM   4433  O   THR   657    -1.148  -4.550    5.519  1.00 13.29
ATOM   4434  N   LEU   658    -2.675  -6.177    5.675  1.00 14.03
ATOM   4435  CA  LEU   658    -2.823  -6.012    7.135  1.00 13.77
ATOM   4436  CB  LEU   658    -3.780  -7.076    7.692  1.00 15.46
ATOM   4437  CG  LEU   658    -5.279  -6.806    7.474  1.00 17.50
ATOM   4438  CD1 LEU   658    -5.634  -7.040    6.012  1.00 21.01
ATOM   4439  CD2 LEU   658    -6.099  -7.729    8.372  1.00 18.31
ATOM   4440  C   LEU   658    -1.561  -5.951    8.003  1.00 12.69
ATOM   4441  O   LEU   658    -1.485  -5.150    8.927  1.00 12.58
ATOM   4442  N   PRO   659    -0.558  -6.799    7.722  1.00 14.97
ATOM   4443  CD  PRO   659    -0.581  -7.923    6.772  1.00 12.48
ATOM   4444  CA  PRO   659     0.685  -6.810    8.501  1.00 12.86
ATOM   4445  CB  PRO   659     1.425  -8.038    7.957  1.00 14.97
ATOM   4446  CG  PRO   659     0.870  -8.175    6.570  1.00 21.34
ATOM   4447  C   PRO   659     1.540  -5.546    8.448  1.00 13.36
ATOM   4448  O   PRO   659     2.434  -5.365    9.273  1.00 14.03
ATOM   4449  N   VAL   660     1.271  -4.668    7.487  1.00 13.75
ATOM   4450  CA  VAL   660     2.031  -3.427    7.358  1.00 12.32
ATOM   4451  CB  VAL   660     1.619  -2.672    6.069  1.00 12.31
ATOM   4452  CG1 VAL   660     2.316  -1.318    5.990  1.00 13.70
ATOM   4453  CG2 VAL   660     1.962  -3.515    4.868  1.00 10.14
ATOM   4454  C   VAL   660     1.794  -2.536    8.563  1.00 13.42
ATOM   4455  O   VAL   660     0.649  -2.261    8.936  1.00 14.34
ATOM   4456  N   THR   661     2.878  -2.077    9.176  1.00 11.86
ATOM   4457  CA  THR   661     2.772  -1.221   10.357  1.00 15.36
ATOM   4458  CB  THR   661     3.795  -1.640   11.439  1.00 17.87
ATOM   4459  OG1 THR   661     3.640  -3.039   11.736  1.00 21.53
ATOM   4460  CG2 THR   661     3.569  -0.835   12.720  1.00 22.77
ATOM   4461  C   THR   661     3.051   0.233    9.998  1.00 14.14
ATOM   4462  O   THR   661     3.553   0.517    8.916  1.00 11.93
ATOM   4463  N   VAL   662     2.722   1.141   10.912  1.00 13.31
ATOM   4464  CA  VAL   662     2.969   2.560   10.712  1.00 15.63
ATOM   4465  CB  VAL   662     2.465   3.395   11.912  1.00 15.72
ATOM   4466  CG1 VAL   662     3.002   4.809   11.832  1.00 18.60
ATOM   4467  CG2 VAL   662     0.938   3.412   11.921  1.00 15.56
ATOM   4468  C   VAL   662     4.471   2.758   10.556  1.00 15.26
ATOM   4469  O   VAL   662     4.913   3.566    9.740  1.00 15.83
ATOM   4470  N   ALA   663     5.255   2.004   11.323  1.00 14.05
ATOM   4471  CA  ALA   663     6.707   2.100   11.236  1.00 14.62
ATOM   4472  CB  ALA   663     7.364   1.189   12.278  1.00 15.71
ATOM   4473  C   ALA   663     7.178   1.733    9.830  1.00 14.13
ATOM   4474  O   ALA   663     8.092   2.370    9.302  1.00 13.75
ATOM   4475  N   ASP   664     6.556   0.729    9.210  1.00 14.22
ATOM   4476  CA  ASP   664     6.966   0.354    7.849  1.00 13.17
ATOM   4477  CB  ASP   664     6.232  -0.886    7.327  1.00 13.69
ATOM   4478  CG  ASP   664     6.434  -2.115    8.200  1.00 11.91
ATOM   4479  OD1 ASP   664     7.525  -2.275    8.780  1.00 10.98
ATOM   4480  OD2 ASP   664     5.494  -2.925    8.257  1.00 14.69
ATOM   4481  C   ASP   664     6.650   1.494    6.895  1.00 12.45
ATOM   4482  O   ASP   664     7.472   1.838    6.047  1.00 10.45
ATOM   4483  N   ILE   665     5.454   2.067    7.015  1.00 11.31
ATOM   4484  CA  ILE   665     5.088   3.165    6.126  1.00 11.92
ATOM   4485  CB  ILE   665     3.680   3.717    6.429  1.00 13.42
ATOM   4486  CG2 ILE   665     3.406   4.942    5.556  1.00 14.44
ATOM   4487  CG1 ILE   665     2.621   2.645    6.162  1.00 11.06
ATOM   4488  CD1 ILE   665     2.482   2.252    4.704  1.00 14.31
ATOM   4489  C   ILE   665     6.097   4.299    6.243  1.00 12.95
ATOM   4490  O   ILE   665     6.547   4.845    5.227  1.00 12.47
ATOM   4491  N   ALA   666     6.453   4.643    7.481  1.00 13.58
ATOM   4492  CA  ALA   666     7.406   5.725    7.764  1.00 13.36
ATOM   4493  CB  ALA   666     7.528   5.929    9.275  1.00 13.24
ATOM   4494  C   ALA   666     8.788   5.468    7.167  1.00 13.44
```

```
ATOM   4495  O   ALA  666      9.435   6.386   6.656  1.00 11.50
ATOM   4496  N   TYR  667      9.232   4.215   7.242  1.00 12.26
ATOM   4497  CA  TYR  667     10.528   3.806   6.703  1.00 12.09
ATOM   4498  CB  TYR  667     10.760   2.315   6.987  1.00 12.31
ATOM   4499  CG  TYR  667     12.002   1.719   6.345  1.00 11.83
ATOM   4500  CD1 TYR  667     13.277   1.995   6.845  1.00 13.98
ATOM   4501  CE1 TYR  667     14.418   1.421   6.275  1.00 14.36
ATOM   4502  CD2 TYR  667     11.897   0.855   5.252  1.00 15.01
ATOM   4503  CE2 TYR  667     13.027   0.280   4.673  1.00 13.37
ATOM   4504  CZ  TYR  667     14.286   0.568   5.189  1.00 15.02
ATOM   4505  OH  TYR  667     15.404   0.011   4.612  1.00 14.89
ATOM   4506  C   TYR  667     10.556   4.050   5.194  1.00 11.94
ATOM   4507  O   TYR  667     11.453   4.712   4.672  1.00  9.26
ATOM   4508  N   HIS  668      9.565   3.501   4.499  1.00 12.01
ATOM   4509  CA  HIS  668      9.473   3.670   3.057  1.00 13.41
ATOM   4510  CB  HIS  668      8.423   2.713   2.486  1.00 12.37
ATOM   4511  CG  HIS  668      8.849   1.278   2.536  1.00 11.83
ATOM   4512  CD2 HIS  668      8.557   0.293   3.419  1.00 11.45
ATOM   4513  ND1 HIS  668      9.774   0.746   1.663  1.00 13.13
ATOM   4514  CE1 HIS  668     10.038  -0.503   2.008  1.00 11.30
ATOM   4515  NE2 HIS  668      9.312  -0.801   3.071  1.00 11.79
ATOM   4516  C   HIS  668      9.159   5.117   2.682  1.00 14.60
ATOM   4517  O   HIS  668      9.641   5.618   1.662  1.00 16.39
ATOM   4518  N   THR  669      8.369   5.803   3.501  1.00 15.65
ATOM   4519  CA  THR  669      8.042   7.197   3.202  1.00 16.31
ATOM   4520  CB  THR  669      7.070   7.797   4.250  1.00 15.04
ATOM   4521  OG1 THR  669      5.787   7.170   4.110  1.00 15.98
ATOM   4522  CG2 THR  669      6.914   9.314   4.036  1.00 15.38
ATOM   4523  C   THR  669      9.313   8.046   3.133  1.00 15.41
ATOM   4524  O   THR  669      9.495   8.841   2.202  1.00 15.01
ATOM   4525  N   ALA  670     10.205   7.858   4.104  1.00 15.82
ATOM   4526  CA  ALA  670     11.458   8.615   4.151  1.00 14.91
ATOM   4527  CB  ALA  670     12.230   8.272   5.426  1.00 16.01
ATOM   4528  C   ALA  670     12.333   8.349   2.934  1.00 16.09
ATOM   4529  O   ALA  670     13.005   9.255   2.416  1.00 14.84
ATOM   4530  N   ALA  671     12.337   7.098   2.483  1.00 15.41
ATOM   4531  CA  ALA  671     13.141   6.713   1.327  1.00 15.41
ATOM   4532  CB  ALA  671     13.162   5.184   1.190  1.00 14.87
ATOM   4533  C   ALA  671     12.606   7.359   0.049  1.00 16.10
ATOM   4534  O   ALA  671     13.377   7.832  -0.794  1.00 14.32
ATOM   4535  N   VAL  672     11.285   7.382  -0.096  1.00 14.00
ATOM   4536  CA  VAL  672     10.677   8.000  -1.269  1.00 14.46
ATOM   4537  CB  VAL  672      9.148   7.738  -1.313  1.00 15.01
ATOM   4538  CG1 VAL  672      8.482   8.651  -2.351  1.00 15.50
ATOM   4539  CG2 VAL  672      8.891   6.278  -1.686  1.00 16.48
ATOM   4540  C   VAL  672     10.933   9.508  -1.270  1.00 14.16
ATOM   4541  O   VAL  672     11.181  10.108  -2.322  1.00 15.05
ATOM   4542  N   ARG  673     10.883  10.125  -0.095  1.00 13.51
ATOM   4543  CA  ARG  673     11.109  11.564  -0.010  1.00 15.06
ATOM   4544  CB  ARG  673     10.777  12.086   1.390  1.00 15.22
ATOM   4545  CG  ARG  673     11.038  13.580   1.570  1.00 16.26
ATOM   4546  CD  ARG  673     10.302  14.412   0.532  1.00 15.12
ATOM   4547  NE  ARG  673      8.877  14.529   0.829  1.00 16.62
ATOM   4548  CZ  ARG  673      7.983  15.058   0.001  1.00 17.11
ATOM   4549  NH1 ARG  673      8.361  15.518  -1.187  1.00 16.70
ATOM   4550  NH2 ARG  673      6.712  15.137   0.361  1.00 15.79
ATOM   4551  C   ARG  673     12.535  11.937  -0.384  1.00 16.05
ATOM   4552  O   ARG  673     12.764  12.998  -0.963  1.00 16.70
ATOM   4553  N   ARG  674     13.490  11.072  -0.050  1.00 15.93
ATOM   4554  CA  ARG  674     14.883  11.332  -0.394  1.00 17.55
ATOM   4555  CB  ARG  674     15.814  10.311   0.279  1.00 17.79
ATOM   4556  CG  ARG  674     15.769  10.334   1.806  1.00 17.42
ATOM   4557  CD  ARG  674     16.944   9.589   2.437  1.00 19.60
ATOM   4558  NE  ARG  674     16.811   9.507   3.894  1.00 22.66
ATOM   4559  CZ  ARG  674     16.242   8.494   4.544  1.00 21.67
ATOM   4560  NH1 ARG  674     15.755   7.458   3.874  1.00 19.18
ATOM   4561  NH2 ARG  674     16.149   8.519   5.866  1.00 22.65
ATOM   4562  C   ARG  674     15.045  11.264  -1.917  1.00 18.81
ATOM   4563  O   ARG  674     15.865  11.978  -2.489  1.00 17.29
ATOM   4564  N   GLY  675     14.250  10.418  -2.568  1.00 18.30
ATOM   4565  CA  GLY  675     14.338  10.292  -4.013  1.00 18.96
ATOM   4566  C   GLY  675     13.602  11.384  -4.770  1.00 19.21
ATOM   4567  O   GLY  675     13.982  11.737  -5.890  1.00 17.51
ATOM   4568  N   ALA  676     12.548  11.916  -4.160  1.00 19.23
ATOM   4569  CA  ALA  676     11.737  12.969  -4.771  1.00 21.38
ATOM   4570  CB  ALA  676     10.515  12.347  -5.445  1.00 22.27
ATOM   4571  C   ALA  676     11.291  14.003  -3.731  1.00 21.87
```

```
ATOM    4572  O    ALA    676      10.160   13.970   -3.260   1.00 21.80
ATOM    4573  N    PRO    677      12.174   14.951   -3.376   1.00 23.81
ATOM    4574  CD   PRO    677      13.544   15.130   -3.888   1.00 24.84
ATOM    4575  CA   PRO    677      11.854   15.984   -2.384   1.00 24.40
ATOM    4576  CB   PRO    677      13.204   16.654   -2.140   1.00 24.98
ATOM    4577  CG   PRO    677      13.859   16.554   -3.459   1.00 25.58
ATOM    4578  C    PRO    677      10.774   16.989   -2.762   1.00 23.70
ATOM    4579  O    PRO    677      10.197   17.640   -1.891   1.00 25.65
ATOM    4580  N    ASN    678      10.496   17.114   -4.054   1.00 24.73
ATOM    4581  CA   ASN    678       9.483   18.057   -4.497   1.00 24.76
ATOM    4582  CB   ASN    678       9.994   18.852   -5.706   1.00 27.05
ATOM    4583  CG   ASN    678      11.256   19.634   -5.395   1.00 30.19
ATOM    4584  OD1  ASN    678      11.303   20.400   -4.430   1.00 31.87
ATOM    4585  ND2  ASN    678      12.291   19.443   -6.212   1.00 31.96
ATOM    4586  C    ASN    678       8.164   17.385   -4.845   1.00 22.32
ATOM    4587  O    ASN    678       7.206   18.056   -5.205   1.00 21.78
ATOM    4588  N    CYS    679       8.093   16.064   -4.731   1.00 21.57
ATOM    4589  CA   CYS    679       6.845   15.393   -5.080   1.00 20.82
ATOM    4590  CB   CYS    679       7.088   13.904   -5.328   1.00 22.07
ATOM    4591  SG   CYS    679       6.942   12.839   -3.863   1.00 21.95
ATOM    4592  C    CYS    679       5.761   15.549   -4.017   1.00 20.00
ATOM    4593  O    CYS    679       6.045   15.896   -2.871   1.00 20.40
ATOM    4594  N    LEU    680       4.513   15.336   -4.432   1.00 19.40
ATOM    4595  CA   LEU    680       3.380   15.365   -3.520   1.00 18.90
ATOM    4596  CB   LEU    680       2.074   15.699   -4.242   1.00 17.17
ATOM    4597  CG   LEU    680       0.812   15.597   -3.385   1.00 16.51
ATOM    4598  CD1  LEU    680       0.927   16.514   -2.164   1.00 17.54
ATOM    4599  CD2  LEU    680      -0.406   15.947   -4.211   1.00 16.35
ATOM    4600  C    LEU    680       3.354   13.917   -3.056   1.00 18.47
ATOM    4601  O    LEU    680       3.069   13.014   -3.846   1.00 17.45
ATOM    4602  N    LEU    681       3.659   13.699   -1.782   1.00 18.84
ATOM    4603  CA   LEU    681       3.734   12.346   -1.245   1.00 18.21
ATOM    4604  CB   LEU    681       5.054   12.192   -0.474   1.00 18.92
ATOM    4605  CG   LEU    681       5.611   10.804   -0.137   1.00 20.05
ATOM    4606  CD1  LEU    681       7.014   10.970    0.436   1.00 18.66
ATOM    4607  CD2  LEU    681       4.714   10.091    0.868   1.00 21.30
ATOM    4608  C    LEU    681       2.566   11.966   -0.353   1.00 16.59
ATOM    4609  O    LEU    681       2.356   12.562    0.701   1.00 16.26
ATOM    4610  N    LEU    682       1.802   10.974   -0.790   1.00 16.90
ATOM    4611  CA   LEU    682       0.677   10.491   -0.007   1.00 17.13
ATOM    4612  CB   LEU    682      -0.520   10.151   -0.900   1.00 18.79
ATOM    4613  CG   LEU    682      -1.449   11.291   -1.333   1.00 22.69
ATOM    4614  CD1  LEU    682      -0.700   12.278   -2.227   1.00 23.30
ATOM    4615  CD2  LEU    682      -2.640   10.700   -2.070   1.00 23.40
ATOM    4616  C    LEU    682       1.156    9.233    0.690   1.00 16.92
ATOM    4617  O    LEU    682       1.870    8.430    0.098   1.00 18.52
ATOM    4618  N    ALA    683       0.803    9.074    1.957   1.00 14.89
ATOM    4619  CA   ALA    683       1.195    7.869    2.682   1.00 14.34
ATOM    4620  CB   ALA    683       2.223    8.201    3.753   1.00 14.56
ATOM    4621  C    ALA    683      -0.049    7.260    3.308   1.00 13.19
ATOM    4622  O    ALA    683      -0.893    7.967    3.857   1.00 12.69
ATOM    4623  N    ASP    684      -0.161    5.943    3.204   1.00 13.76
ATOM    4624  CA   ASP    684      -1.292    5.224    3.761   1.00 13.79
ATOM    4625  CB   ASP    684      -1.369    3.811    3.199   1.00 17.15
ATOM    4626  CG   ASP    684      -2.237    3.701    1.972   1.00 18.93
ATOM    4627  OD1  ASP    684      -2.988    4.647    1.660   1.00 17.43
ATOM    4628  OD2  ASP    684      -2.174    2.630    1.334   1.00 19.86
ATOM    4629  C    ASP    684      -1.192    5.050    5.256   1.00 14.01
ATOM    4630  O    ASP    684      -0.098    4.854    5.791   1.00 13.68
ATOM    4631  N    LEU    685      -2.329    5.126    5.938   1.00 14.34
ATOM    4632  CA   LEU    685      -2.335    4.819    7.359   1.00 15.73
ATOM    4633  CB   LEU    685      -3.430    5.568    8.128   1.00 17.73
ATOM    4634  CG   LEU    685      -3.114    7.008    8.538   1.00 18.92
ATOM    4635  CD1  LEU    685      -4.058    7.437    9.658   1.00 20.70
ATOM    4636  CD2  LEU    685      -1.670    7.106    9.013   1.00 20.52
ATOM    4637  C    LEU    685      -2.713    3.346    7.219   1.00 15.76
ATOM    4638  O    LEU    685      -3.731    3.022    6.616   1.00 14.86
ATOM    4639  N    PRO    686      -1.876    2.433    7.734   1.00 15.32
ATOM    4640  CD   PRO    686      -0.579    2.697    8.380   1.00 16.43
ATOM    4641  CA   PRO    686      -2.139    0.996    7.643   1.00 16.10
ATOM    4642  CB   PRO    686      -0.809    0.380    8.085   1.00 17.06
ATOM    4643  CG   PRO    686      -0.283    1.383    9.073   1.00 16.35
ATOM    4644  C    PRO    686      -3.327    0.488    8.458   1.00 16.41
ATOM    4645  O    PRO    686      -4.008    1.254    9.143   1.00 16.37
ATOM    4646  N    PHE    687      -3.563   -0.815    8.358   1.00 15.03
ATOM    4647  CA   PHE    687      -4.647   -1.494    9.062   1.00 15.40
ATOM    4648  CB   PHE    687      -4.470   -3.007    8.892   1.00 14.01
```

```
ATOM   4649  CG   PHE   687    -5.265   -3.841    9.861  1.00 15.81
ATOM   4650  CD1  PHE   687    -6.655   -3.762    9.905  1.00 16.16
ATOM   4651  CD2  PHE   687    -4.619   -4.758   10.685  1.00 14.41
ATOM   4652  CE1  PHE   687    -7.390   -4.595   10.751  1.00 16.59
ATOM   4653  CE2  PHE   687    -5.337   -5.597   11.535  1.00 14.28
ATOM   4654  CZ   PHE   687    -6.726   -5.516   11.568  1.00 18.27
ATOM   4655  C    PHE   687    -4.663   -1.106   10.538  1.00 13.34
ATOM   4656  O    PHE   687    -3.634   -1.136   11.209  1.00 12.84
ATOM   4657  N    MET   688    -5.841   -0.732   11.027  1.00 14.65
ATOM   4658  CA   MET   688    -6.035   -0.332   12.418  1.00 14.46
ATOM   4659  CB   MET   688    -5.922   -1.558   13.340  1.00 16.06
ATOM   4660  CG   MET   688    -6.712   -1.415   14.648  1.00 16.59
ATOM   4661  SD   MET   688    -8.529   -1.347   14.400  1.00 16.99
ATOM   4662  CE   MET   688    -8.858   -3.054   14.056  1.00 19.17
ATOM   4663  C    MET   688    -5.087    0.767   12.911  1.00 14.94
ATOM   4664  O    MET   688    -4.718    0.793   14.087  1.00 18.65
ATOM   4665  N    ALA   689    -4.680    1.676   12.031  1.00 14.13
ATOM   4666  CA   ALA   689    -3.803    2.765   12.466  1.00 13.66
ATOM   4667  CB   ALA   689    -2.719    3.034   11.421  1.00 15.41
ATOM   4668  C    ALA   689    -4.610    4.046   12.716  1.00 13.55
ATOM   4669  O    ALA   689    -4.051    5.085   13.051  1.00 14.39
ATOM   4670  N    TYR   690    -5.923    3.971   12.545  1.00 13.83
ATOM   4671  CA   TYR   690    -6.775    5.133   12.763  1.00 13.76
ATOM   4672  CB   TYR   690    -7.009    5.875   11.433  1.00 14.18
ATOM   4673  CG   TYR   690    -7.351    4.979   10.261  1.00 12.90
ATOM   4674  CD1  TYR   690    -8.666    4.841    9.818  1.00 12.68
ATOM   4675  CE1  TYR   690    -8.981    4.004    8.741  1.00 13.27
ATOM   4676  CD2  TYR   690    -6.352    4.257    9.599  1.00 13.42
ATOM   4677  CE2  TYR   690    -6.651    3.418    8.526  1.00 14.00
ATOM   4678  CZ   TYR   690    -7.963    3.297    8.101  1.00 13.04
ATOM   4679  OH   TYR   690    -8.246    2.468    7.030  1.00 14.87
ATOM   4680  C    TYR   690    -8.087    4.693   13.392  1.00 14.99
ATOM   4681  O    TYR   690    -9.166    5.144   13.005  1.00 15.19
ATOM   4682  N    ALA   691    -7.975    3.809   14.382  1.00 13.50
ATOM   4683  CA   ALA   691    -9.135    3.239   15.082  1.00 14.83
ATOM   4684  CB   ALA   691    -8.673    2.102   15.993  1.00 13.88
ATOM   4685  C    ALA   691    -9.924    4.257   15.888  1.00 13.52
ATOM   4686  O    ALA   691   -11.120    4.084   16.110  1.00 14.21
ATOM   4687  N    THR   692    -9.235    5.293   16.354  1.00 15.07
ATOM   4688  CA   THR   692    -9.856    6.374   17.109  1.00 16.94
ATOM   4689  CB   THR   692    -9.608    6.268   18.629  1.00 14.55
ATOM   4690  OG1  THR   692    -8.219    6.492   18.902  1.00 15.54
ATOM   4691  CG2  THR   692   -10.015    4.897   19.152  1.00 15.71
ATOM   4692  C    THR   692    -9.165    7.635   16.636  1.00 18.24
ATOM   4693  O    THR   692    -8.080    7.576   16.059  1.00 18.19
ATOM   4694  N    PRO   693    -9.790    8.794   16.864  1.00 17.17
ATOM   4695  CD   PRO   693   -11.169    8.968   17.351  1.00 18.47
ATOM   4696  CA   PRO   693    -9.209   10.074   16.457  1.00 18.57
ATOM   4697  CB   PRO   693   -10.195   11.090   17.032  1.00 20.23
ATOM   4698  CG   PRO   693   -11.512   10.368   16.873  1.00 19.28
ATOM   4699  C    PRO   693    -7.801   10.241   17.021  1.00 18.65
ATOM   4700  O    PRO   693    -6.853   10.516   16.283  1.00 15.76
ATOM   4701  N    GLU   694    -7.668   10.064   18.334  1.00 18.32
ATOM   4702  CA   GLU   694    -6.371   10.194   18.987  1.00 21.05
ATOM   4703  CB   GLU   694    -6.485    9.871   20.486  1.00 24.65
ATOM   4704  CG   GLU   694    -6.958   11.039   21.341  1.00 32.62
ATOM   4705  CD   GLU   694    -6.747   10.804   22.832  1.00 35.61
ATOM   4706  OE1  GLU   694    -5.624   10.413   23.221  1.00 40.42
ATOM   4707  OE2  GLU   694    -7.694   11.024   23.616  1.00 40.47
ATOM   4708  C    GLU   694    -5.290    9.321   18.352  1.00 18.88
ATOM   4709  O    GLU   694    -4.156    9.766   18.181  1.00 19.69
ATOM   4710  N    GLN   695    -5.621    8.078   18.013  1.00 18.90
ATOM   4711  CA   GLN   695    -4.623    7.207   17.383  1.00 17.55
ATOM   4712  CB   GLN   695    -5.095    5.759   17.375  1.00 19.52
ATOM   4713  CG   GLN   695    -5.109    5.143   18.762  1.00 25.76
ATOM   4714  CD   GLN   695    -5.606    3.722   18.754  1.00 26.70
ATOM   4715  OE1  GLN   695    -5.007    2.849   18.128  1.00 28.17
ATOM   4716  NE2  GLN   695    -6.709    3.477   19.455  1.00 28.69
ATOM   4717  C    GLN   695    -4.332    7.671   15.961  1.00 14.39
ATOM   4718  O    GLN   695    -3.197    7.598   15.498  1.00 14.23
ATOM   4719  N    ALA   696    -5.365    8.134   15.269  1.00 13.25
ATOM   4720  CA   ALA   696    -5.187    8.637   13.913  1.00 12.91
ATOM   4721  CB   ALA   696    -6.517    9.128   13.352  1.00 12.84
ATOM   4722  C    ALA   696    -4.184    9.786   13.965  1.00 13.88
ATOM   4723  O    ALA   696    -3.254    9.849   13.158  1.00 14.82
ATOM   4724  N    PHE   697    -4.371   10.691   14.924  1.00 13.95
ATOM   4725  CA   PHE   697    -3.478   11.849   15.071  1.00 14.74
```

```
ATOM    4726  CB   PHE    697     -3.847  12.688  16.307  1.00 14.39
ATOM    4727  CG   PHE    697     -5.272  13.165  16.326  1.00 14.70
ATOM    4728  CD1  PHE    697     -5.973  13.364  15.138  1.00 15.78
ATOM    4729  CD2  PHE    697     -5.913  13.417  17.535  1.00 17.31
ATOM    4730  CE1  PHE    697     -7.296  13.803  15.157  1.00 17.92
ATOM    4731  CE2  PHE    697     -7.235  13.858  17.567  1.00 18.65
ATOM    4732  CZ   PHE    697     -7.928  14.050  16.373  1.00 17.31
ATOM    4733  C    PHE    697     -2.015  11.456  15.206  1.00 16.50
ATOM    4734  O    PHE    697     -1.155  11.972  14.491  1.00 13.69
ATOM    4735  N    GLU    698     -1.747  10.543  16.138  1.00 15.66
ATOM    4736  CA   GLU    698     -0.391  10.082  16.418  1.00 17.86
ATOM    4737  CB   GLU    698     -0.409   9.111  17.603  1.00 21.29
ATOM    4738  CG   GLU    698      0.971   8.622  18.050  1.00 30.05
ATOM    4739  CD   GLU    698      1.631   9.547  19.063  1.00 34.72
ATOM    4740  OE1  GLU    698      1.784  10.753  18.766  1.00 37.42
ATOM    4741  OE2  GLU    698      1.998   9.064  20.165  1.00 40.64
ATOM    4742  C    GLU    698      0.248   9.399  15.213  1.00 16.35
ATOM    4743  O    GLU    698      1.385   9.702  14.836  1.00 16.77
ATOM    4744  N    ASN    699     -0.486   8.473  14.614  1.00 15.59
ATOM    4745  CA   ASN    699      0.033   7.743  13.471  1.00 15.22
ATOM    4746  CB   ASN    699     -0.838   6.506  13.200  1.00 14.54
ATOM    4747  CG   ASN    699     -0.748   5.488  14.328  1.00 17.82
ATOM    4748  OD1  ASN    699      0.320   5.316  14.927  1.00 15.96
ATOM    4749  ND2  ASN    699     -1.857   4.809  14.621  1.00 15.38
ATOM    4750  C    ASN    699      0.159   8.636  12.236  1.00 14.83
ATOM    4751  O    ASN    699      1.134   8.535  11.488  1.00 14.23
ATOM    4752  N    ALA    700     -0.802   9.529  12.026  1.00 14.50
ATOM    4753  CA   ALA    700     -0.710  10.431  10.880  1.00 15.69
ATOM    4754  CB   ALA    700     -1.961  11.288  10.781  1.00 14.56
ATOM    4755  C    ALA    700      0.525  11.316  11.044  1.00 15.36
ATOM    4756  O    ALA    700      1.253  11.555  10.089  1.00 14.90
ATOM    4757  N    ALA    701      0.770  11.793  12.262  1.00 15.92
ATOM    4758  CA   ALA    701      1.920  12.659  12.499  1.00 16.05
ATOM    4759  CB   ALA    701      1.888  13.201  13.920  1.00 15.03
ATOM    4760  C    ALA    701      3.232  11.930  12.244  1.00 15.03
ATOM    4761  O    ALA    701      4.184  12.509  11.730  1.00 16.35
ATOM    4762  N    THR    702      3.289  10.657  12.612  1.00 14.38
ATOM    4763  CA   THR    702      4.503   9.878  12.411  1.00 12.85
ATOM    4764  CB   THR    702      4.323   8.450  12.956  1.00 12.19
ATOM    4765  OG1  THR    702      4.034   8.522  14.354  1.00 12.71
ATOM    4766  CG2  THR    702      5.577   7.625  12.744  1.00 12.48
ATOM    4767  C    THR    702      4.861   9.817  10.928  1.00 15.73
ATOM    4768  O    THR    702      6.015   9.991  10.549  1.00 14.96
ATOM    4769  N    VAL    703      3.855   9.594  10.095  1.00 14.32
ATOM    4770  CA   VAL    703      4.061   9.494   8.665  1.00 17.24
ATOM    4771  CB   VAL    703      2.825   8.862   8.019  1.00 18.94
ATOM    4772  CG1  VAL    703      2.763   9.181   6.557  1.00 24.70
ATOM    4773  CG2  VAL    703      2.866   7.360   8.248  1.00 17.69
ATOM    4774  C    VAL    703      4.373  10.850   8.037  1.00 17.44
ATOM    4775  O    VAL    703      5.207  10.944   7.131  1.00 17.66
ATOM    4776  N    MET    704      3.705  11.895   8.519  1.00 15.75
ATOM    4777  CA   MET    704      3.942  13.246   8.020  1.00 18.71
ATOM    4778  CB   MET    704      2.926  14.231   8.615  1.00 19.63
ATOM    4779  CG   MET    704      1.461  13.959   8.263  1.00 24.43
ATOM    4780  SD   MET    704      1.046  14.259   6.517  1.00 27.09
ATOM    4781  CE   MET    704      1.225  16.072   6.424  1.00 25.27
ATOM    4782  C    MET    704      5.373  13.691   8.379  1.00 17.56
ATOM    4783  O    MET    704      6.075  14.240   7.534  1.00 15.47
ATOM    4784  N    ARG    705      5.810  13.459   9.619  1.00 16.57
ATOM    4785  CA   ARG    705      7.160  13.856  10.007  1.00 17.21
ATOM    4786  CB   ARG    705      7.424  13.597  11.499  1.00 18.12
ATOM    4787  CG   ARG    705      6.566  14.413  12.470  1.00 17.42
ATOM    4788  CD   ARG    705      7.139  14.379  13.887  1.00 18.37
ATOM    4789  NE   ARG    705      6.188  14.923  14.862  1.00 21.69
ATOM    4790  CZ   ARG    705      5.169  14.242  15.377  1.00 21.26
ATOM    4791  NH1  ARG    705      4.960  12.980  15.024  1.00 23.11
ATOM    4792  NH2  ARG    705      4.340  14.830  16.225  1.00 22.67
ATOM    4793  C    ARG    705      8.196  13.104   9.193  1.00 17.07
ATOM    4794  O    ARG    705      9.330  13.568   9.027  1.00 17.74
ATOM    4795  N    ALA    706      7.807  11.942   8.682  1.00 16.11
ATOM    4796  CA   ALA    706      8.709  11.112   7.891  1.00 15.58
ATOM    4797  CB   ALA    706      8.235   9.662   7.921  1.00 14.95
ATOM    4798  C    ALA    706      8.847  11.584   6.445  1.00 15.19
ATOM    4799  O    ALA    706      9.688  11.068   5.709  1.00 15.93
ATOM    4800  N    GLY    707      8.022  12.544   6.033  1.00 14.94
ATOM    4801  CA   GLY    707      8.130  13.053   4.677  1.00 15.89
ATOM    4802  C    GLY    707      6.853  13.203   3.871  1.00 16.03
```

ATOM	4803	O	GLY	707	6.851	13.882	2.843	1.00	17.90
ATOM	4804	N	ALA	708	5.764	12.591	4.321	1.00	15.28
ATOM	4805	CA	ALA	708	4.500	12.675	3.598	1.00	14.65
ATOM	4806	CB	ALA	708	3.524	11.646	4.140	1.00	11.62
ATOM	4807	C	ALA	708	3.870	14.060	3.677	1.00	15.64
ATOM	4808	O	ALA	708	4.102	14.809	4.628	1.00	14.42
ATOM	4809	N	ASN	709	3.061	14.394	2.675	1.00	16.20
ATOM	4810	CA	ASN	709	2.369	15.682	2.660	1.00	17.11
ATOM	4811	CB	ASN	709	2.482	16.363	1.297	1.00	16.35
ATOM	4812	CG	ASN	709	3.905	16.548	0.855	1.00	16.63
ATOM	4813	OD1	ASN	709	4.693	17.223	1.518	1.00	19.11
ATOM	4814	ND2	ASN	709	4.246	15.951	-0.271	1.00	13.26
ATOM	4815	C	ASN	709	0.890	15.455	2.931	1.00	17.83
ATOM	4816	O	ASN	709	0.163	16.388	3.252	1.00	18.60
ATOM	4817	N	MET	710	0.448	14.212	2.779	1.00	17.20
ATOM	4818	CA	MET	710	-0.955	13.871	2.969	1.00	16.87
ATOM	4819	CB	MET	710	-1.713	14.127	1.654	1.00	18.60
ATOM	4820	CG	MET	710	-3.200	13.816	1.659	1.00	20.01
ATOM	4821	SD	MET	710	-3.944	14.052	-0.001	1.00	21.60
ATOM	4822	CE	MET	710	-4.743	15.673	0.168	1.00	23.23
ATOM	4823	C	MET	710	-1.065	12.405	3.377	1.00	16.40
ATOM	4824	O	MET	710	-0.177	11.604	3.085	1.00	14.55
ATOM	4825	N	VAL	711	-2.152	12.070	4.065	1.00	16.03
ATOM	4826	CA	VAL	711	-2.391	10.712	4.528	1.00	16.57
ATOM	4827	CB	VAL	711	-2.552	10.697	6.065	1.00	19.08
ATOM	4828	CG1	VAL	711	-3.021	9.352	6.515	1.00	23.70
ATOM	4829	CG2	VAL	711	-1.230	11.054	6.730	1.00	17.88
ATOM	4830	C	VAL	711	-3.655	10.132	3.896	1.00	15.86
ATOM	4831	O	VAL	711	-4.635	10.851	3.690	1.00	14.07
ATOM	4832	N	LYS	712	-3.631	8.840	3.570	1.00	13.84
ATOM	4833	CA	LYS	712	-4.798	8.187	2.985	1.00	14.28
ATOM	4834	CB	LYS	712	-4.445	7.501	1.648	1.00	14.48
ATOM	4835	CG	LYS	712	-5.645	6.773	1.006	1.00	13.64
ATOM	4836	CD	LYS	712	-5.475	6.476	-0.491	1.00	14.90
ATOM	4837	CE	LYS	712	-4.471	5.361	-0.770	1.00	14.70
ATOM	4838	NZ	LYS	712	-4.882	4.059	-0.157	1.00	15.92
ATOM	4839	C	LYS	712	-5.371	7.160	3.960	1.00	15.39
ATOM	4840	O	LYS	712	-4.632	6.361	4.532	1.00	13.66
ATOM	4841	N	ILE	713	-6.683	7.203	4.167	1.00	15.54
ATOM	4842	CA	ILE	713	-7.349	6.260	5.060	1.00	16.63
ATOM	4843	CB	ILE	713	-7.800	6.949	6.379	1.00	18.02
ATOM	4844	CG2	ILE	713	-6.584	7.372	7.181	1.00	19.14
ATOM	4845	CG1	ILE	713	-8.667	8.173	6.072	1.00	20.03
ATOM	4846	CD1	ILE	713	-9.130	8.925	7.332	1.00	19.76
ATOM	4847	C	ILE	713	-8.553	5.642	4.351	1.00	18.46
ATOM	4848	O	ILE	713	-9.224	6.306	3.561	1.00	17.02
ATOM	4849	N	GLU	714	-8.809	4.363	4.622	1.00	17.38
ATOM	4850	CA	GLU	714	-9.917	3.642	3.995	1.00	18.87
ATOM	4851	CB	GLU	714	-9.530	2.180	3.735	1.00	18.90
ATOM	4852	CG	GLU	714	-8.183	1.990	3.074	1.00	22.06
ATOM	4853	CD	GLU	714	-7.866	0.530	2.797	1.00	23.62
ATOM	4854	OE1	GLU	714	-8.597	-0.357	3.292	1.00	22.57
ATOM	4855	OE2	GLU	714	-6.876	0.267	2.082	1.00	26.90
ATOM	4856	C	GLU	714	-11.162	3.649	4.867	1.00	18.79
ATOM	4857	O	GLU	714	-11.091	3.389	6.069	1.00	17.88
ATOM	4858	N	GLY	715	-12.304	3.940	4.256	1.00	18.83
ATOM	4859	CA	GLY	715	-13.545	3.956	5.002	1.00	20.89
ATOM	4860	C	GLY	715	-14.476	5.056	4.553	1.00	21.05
ATOM	4861	O	GLY	715	-14.063	5.980	3.855	1.00	22.49
ATOM	4862	N	GLY	716	-15.738	4.953	4.958	1.00	21.69
ATOM	4863	CA	GLY	716	-16.723	5.954	4.585	1.00	20.54
ATOM	4864	C	GLY	716	-17.198	6.833	5.731	1.00	19.68
ATOM	4865	O	GLY	716	-16.396	7.349	6.503	1.00	18.63
ATOM	4866	N	GLU	717	-18.513	7.004	5.828	1.00	20.60
ATOM	4867	CA	GLU	717	-19.143	7.828	6.857	1.00	23.06
ATOM	4868	CB	GLU	717	-20.631	7.498	6.948	1.00	26.89
ATOM	4869	CG	GLU	717	-21.512	8.436	6.154	1.00	35.80
ATOM	4870	CD	GLU	717	-21.970	9.634	6.959	1.00	37.28
ATOM	4871	OE1	GLU	717	-21.125	10.277	7.616	1.00	39.12
ATOM	4872	OE2	GLU	717	-23.183	9.932	6.925	1.00	39.31
ATOM	4873	C	GLU	717	-18.562	7.785	8.257	1.00	21.97
ATOM	4874	O	GLU	717	-18.327	8.830	8.865	1.00	20.61
ATOM	4875	N	TRP	718	-18.340	6.587	8.788	1.00	20.43
ATOM	4876	CA	TRP	718	-17.813	6.487	10.145	1.00	18.97
ATOM	4877	CB	TRP	718	-17.553	5.019	10.527	1.00	16.93
ATOM	4878	CG	TRP	718	-16.338	4.387	9.900	1.00	17.31
ATOM	4879	CD2	TRP	718	-15.033	4.287	10.481	1.00	15.20

```
ATOM   4880  CE2  TRP   718    -14.213    3.604    9.554   1.00 17.66
ATOM   4881  CE3  TRP   718    -14.475    4.707   11.698   1.00 16.72
ATOM   4882  CD1  TRP   718    -16.260    3.780    8.677   1.00 16.47
ATOM   4883  NE1  TRP   718    -14.986    3.305    8.462   1.00 17.35
ATOM   4884  CZ2  TRP   718    -12.863    3.332    9.804   1.00 17.75
ATOM   4885  CZ3  TRP   718    -13.133    4.436   11.947   1.00 18.17
ATOM   4886  CH2  TRP   718    -12.342    3.753   11.001   1.00 18.73
ATOM   4887  C    TRP   718    -16.554    7.318   10.372   1.00 17.36
ATOM   4888  O    TRP   718    -16.263    7.697   11.504   1.00 16.96
ATOM   4889  N    LEU   719    -15.829    7.624    9.295   1.00 17.61
ATOM   4890  CA   LEU   719    -14.587    8.398    9.392   1.00 16.01
ATOM   4891  CB   LEU   719    -13.634    7.998    8.264   1.00 19.58
ATOM   4892  CG   LEU   719    -12.805    6.729    8.475   1.00 20.53
ATOM   4893  CD1  LEU   719    -12.035    6.426    7.205   1.00 20.90
ATOM   4894  CD2  LEU   719    -11.869    6.919    9.657   1.00 21.41
ATOM   4895  C    LEU   719    -14.722    9.918    9.385   1.00 16.42
ATOM   4896  O    LEU   719    -13.726   10.625    9.538   1.00 15.51
ATOM   4897  N    VAL   720    -15.938   10.425    9.225   1.00 15.73
ATOM   4898  CA   VAL   720    -16.154   11.869    9.181   1.00 16.54
ATOM   4899  CB   VAL   720    -17.664   12.201    9.174   1.00 16.38
ATOM   4900  CG1  VAL   720    -17.875   13.699    9.349   1.00 16.79
ATOM   4901  CG2  VAL   720    -18.283   11.734    7.867   1.00 18.53
ATOM   4902  C    VAL   720    -15.478   12.644   10.306   1.00 15.87
ATOM   4903  O    VAL   720    -14.713   13.572   10.045   1.00 15.80
ATOM   4904  N    GLU   721    -15.745   12.268   11.552   1.00 15.71
ATOM   4905  CA   GLU   721    -15.133   12.966   12.680   1.00 16.66
ATOM   4906  CB   GLU   721    -15.589   12.346   14.003   1.00 18.48
ATOM   4907  CG   GLU   721    -14.947   12.976   15.227   1.00 22.68
ATOM   4908  CD   GLU   721    -15.367   12.293   16.516   1.00 25.74
ATOM   4909  OE1  GLU   721    -14.966   11.131   16.732   1.00 27.93
ATOM   4910  OE2  GLU   721    -16.107   12.920   17.303   1.00 27.98
ATOM   4911  C    GLU   721    -13.610   12.935   12.606   1.00 15.34
ATOM   4912  O    GLU   721    -12.951   13.942   12.857   1.00 14.72
ATOM   4913  N    THR   722    -13.055   11.772   12.274   1.00 14.80
ATOM   4914  CA   THR   722    -11.608   11.624   12.175   1.00 14.47
ATOM   4915  CB   THR   722    -11.213   10.164   11.860   1.00 16.94
ATOM   4916  OG1  THR   722    -11.580    9.322   12.964   1.00 19.05
ATOM   4917  CG2  THR   722     -9.710   10.057   11.628   1.00 15.42
ATOM   4918  C    THR   722    -11.034   12.536   11.099   1.00 15.01
ATOM   4919  O    THR   722    -10.001   13.167   11.299   1.00 14.67
ATOM   4920  N    VAL   723    -11.703   12.606    9.954   1.00 16.05
ATOM   4921  CA   VAL   723    -11.233   13.466    8.867   1.00 15.71
ATOM   4922  CB   VAL   723    -12.058   13.236    7.587   1.00 15.17
ATOM   4923  CG1  VAL   723    -11.612   14.206    6.486   1.00 14.07
ATOM   4924  CG2  VAL   723    -11.880   11.807    7.122   1.00 15.82
ATOM   4925  C    VAL   723    -11.307   14.943    9.268   1.00 16.42
ATOM   4926  O    VAL   723    -10.353   15.694    9.079   1.00 16.04
ATOM   4927  N    GLN   724    -12.437   15.354    9.831   1.00 18.63
ATOM   4928  CA   GLN   724    -12.599   16.743   10.241   1.00 19.28
ATOM   4929  CB   GLN   724    -13.980   16.955   10.869   1.00 22.80
ATOM   4930  CG   GLN   724    -15.145   16.539    9.983   1.00 27.70
ATOM   4931  CD   GLN   724    -16.488   16.695   10.675   1.00 30.60
ATOM   4932  OE1  GLN   724    -16.669   16.241   11.806   1.00 32.97
ATOM   4933  NE2  GLN   724    -17.440   17.328    9.996   1.00 32.67
ATOM   4934  C    GLN   724    -11.513   17.132   11.241   1.00 19.06
ATOM   4935  O    GLN   724    -10.880   18.180   11.107   1.00 16.76
ATOM   4936  N    MET   725    -11.288   16.283   12.239   1.00 15.76
ATOM   4937  CA   MET   725    -10.280   16.576   13.254   1.00 15.65
ATOM   4938  CB   MET   725    -10.440   15.634   14.445   1.00 14.12
ATOM   4939  CG   MET   725    -11.733   15.858   15.188   1.00 17.99
ATOM   4940  SD   MET   725    -11.866   14.852   16.672   1.00 21.90
ATOM   4941  CE   MET   725    -10.847   15.827   17.760   1.00 19.31
ATOM   4942  C    MET   725     -8.849   16.537   12.744   1.00 14.34
ATOM   4943  O    MET   725     -8.018   17.336   13.171   1.00 14.82
ATOM   4944  N    LEU   726     -8.553   15.615   11.834   1.00 13.91
ATOM   4945  CA   LEU   726     -7.207   15.540   11.292   1.00 15.00
ATOM   4946  CB   LEU   726     -7.067   14.333   10.366   1.00 13.52
ATOM   4947  CG   LEU   726     -6.658   13.016   11.034   1.00 15.57
ATOM   4948  CD1  LEU   726     -6.916   11.860   10.087   1.00 15.92
ATOM   4949  CD2  LEU   726     -5.205   13.077   11.443   1.00 15.18
ATOM   4950  C    LEU   726     -6.873   16.819   10.526   1.00 16.85
ATOM   4951  O    LEU   726     -5.783   17.376   10.664   1.00 16.74
ATOM   4952  N    THR   727     -7.822   17.275    9.716   1.00 17.73
ATOM   4953  CA   THR   727     -7.640   18.482    8.909   1.00 22.25
ATOM   4954  CB   THR   727     -8.885   18.755    8.050   1.00 23.64
ATOM   4955  OG1  THR   727     -9.135   17.618    7.207   1.00 25.71
ATOM   4956  CG2  THR   727     -8.669   19.989    7.171   1.00 26.68
```

```
ATOM   4957  C    THR  727      -7.332  19.719   9.747  1.00 22.81
ATOM   4958  O    THR  727      -6.363  20.442   9.473  1.00 22.47
ATOM   4959  N    GLU  728      -8.143  19.968  10.769  1.00 23.34
ATOM   4960  CA   GLU  728      -7.903  21.131  11.621  1.00 25.65
ATOM   4961  CB   GLU  728      -9.052  21.331  12.623  1.00 28.30
ATOM   4962  CG   GLU  728      -9.655  20.064  13.186  1.00 30.71
ATOM   4963  CD   GLU  728     -10.802  20.348  14.159  1.00 33.29
ATOM   4964  OE1  GLU  728     -11.541  21.333  13.952  1.00 35.04
ATOM   4965  OE2  GLU  728     -10.979  19.579  15.124  1.00 32.42
ATOM   4966  C    GLU  728      -6.570  21.013  12.353  1.00 24.86
ATOM   4967  O    GLU  728      -6.069  21.993  12.898  1.00 25.47
ATOM   4968  N    ARG  729      -5.986  19.816  12.353  1.00 24.34
ATOM   4969  CA   ARG  729      -4.700  19.612  13.010  1.00 22.72
ATOM   4970  CB   ARG  729      -4.757  18.372  13.907  1.00 20.17
ATOM   4971  CG   ARG  729      -5.646  18.597  15.121  1.00 18.27
ATOM   4972  CD   ARG  729      -5.986  17.326  15.876  1.00 16.32
ATOM   4973  NE   ARG  729      -6.862  17.615  17.011  1.00 17.63
ATOM   4974  CZ   ARG  729      -8.095  18.109  16.911  1.00 19.57
ATOM   4975  NH1  ARG  729      -8.621  18.374  15.725  1.00 20.07
ATOM   4976  NH2  ARG  729      -8.808  18.350  18.003  1.00 20.63
ATOM   4977  C    ARG  729      -3.554  19.524  12.004  1.00 22.25
ATOM   4978  O    ARG  729      -2.546  18.855  12.232  1.00 21.75
ATOM   4979  N    ALA  730      -3.737  20.211  10.880  1.00 22.50
ATOM   4980  CA   ALA  730      -2.732  20.296   9.825  1.00 21.57
ATOM   4981  CB   ALA  730      -1.419  20.801  10.417  1.00 20.27
ATOM   4982  C    ALA  730      -2.472  19.044   9.008  1.00 19.61
ATOM   4983  O    ALA  730      -1.474  18.978   8.301  1.00 18.88
ATOM   4984  N    VAL  731      -3.356  18.057   9.083  1.00 17.78
ATOM   4985  CA   VAL  731      -3.136  16.846   8.308  1.00 17.66
ATOM   4986  CB   VAL  731      -3.204  15.596   9.205  1.00 17.57
ATOM   4987  CG1  VAL  731      -2.985  14.339   8.363  1.00 16.76
ATOM   4988  CG2  VAL  731      -2.138  15.688  10.296  1.00 18.90
ATOM   4989  C    VAL  731      -4.114  16.673   7.153  1.00 17.88
ATOM   4990  O    VAL  731      -5.283  16.373   7.365  1.00 17.43
ATOM   4991  N    PRO  732      -3.652  16.892   5.912  1.00 17.50
ATOM   4992  CD   PRO  732      -2.351  17.419   5.475  1.00 19.31
ATOM   4993  CA   PRO  732      -4.554  16.727   4.773  1.00 18.43
ATOM   4994  CB   PRO  732      -3.771  17.325   3.607  1.00 19.15
ATOM   4995  CG   PRO  732      -2.359  17.103   4.002  1.00 23.17
ATOM   4996  C    PRO  732      -4.820  15.248   4.606  1.00 16.61
ATOM   4997  O    PRO  732      -3.927  14.415   4.797  1.00 15.91
ATOM   4998  N    VAL  733      -6.056  14.925   4.257  1.00 15.66
ATOM   4999  CA   VAL  733      -6.466  13.538   4.101  1.00 16.50
ATOM   5000  CB   VAL  733      -7.543  13.184   5.144  1.00 16.63
ATOM   5001  CG1  VAL  733      -7.868  11.690   5.069  1.00 21.58
ATOM   5002  CG2  VAL  733      -7.070  13.588   6.541  1.00 17.55
ATOM   5003  C    VAL  733      -7.038  13.185   2.737  1.00 16.46
ATOM   5004  O    VAL  733      -7.803  13.951   2.160  1.00 16.24
ATOM   5005  N    CYS  734      -6.668  12.010   2.242  1.00 13.15
ATOM   5006  CA   CYS  734      -7.184  11.490   0.983  1.00 13.80
ATOM   5007  CB   CYS  734      -6.051  10.957   0.120  1.00 11.02
ATOM   5008  SG   CYS  734      -6.600  10.069  -1.355  1.00 15.01
ATOM   5009  C    CYS  734      -8.075  10.324   1.397  1.00 14.24
ATOM   5010  O    CYS  734      -7.641   9.453   2.150  1.00 16.01
ATOM   5011  N    GLY  735      -9.314  10.323   0.921  1.00 12.03
ATOM   5012  CA   GLY  735     -10.229   9.250   1.246  1.00 13.47
ATOM   5013  C    GLY  735      -9.985   8.069   0.322  1.00 14.63
ATOM   5014  O    GLY  735      -9.214   8.174  -0.630  1.00 15.25
ATOM   5015  N    HIS  736     -10.647   6.946   0.593  1.00 14.52
ATOM   5016  CA   HIS  736     -10.484   5.736  -0.216  1.00 14.30
ATOM   5017  CB   HIS  736      -9.269   4.956   0.311  1.00 15.08
ATOM   5018  CG   HIS  736      -8.839   3.797  -0.542  1.00 16.75
ATOM   5019  CD2  HIS  736      -9.519   3.010  -1.411  1.00 17.45
ATOM   5020  ND1  HIS  736      -7.559   3.287  -0.488  1.00 16.99
ATOM   5021  CE1  HIS  736      -7.469   2.236  -1.282  1.00 18.58
ATOM   5022  NE2  HIS  736      -8.645   2.045  -1.854  1.00 16.34
ATOM   5023  C    HIS  736     -11.768   4.919  -0.089  1.00 14.46
ATOM   5024  O    HIS  736     -12.096   4.441   1.000  1.00 14.94
ATOM   5025  N    LEU  737     -12.497   4.777  -1.198  1.00 16.18
ATOM   5026  CA   LEU  737     -13.763   4.033  -1.215  1.00 17.93
ATOM   5027  CB   LEU  737     -14.946   4.992  -1.415  1.00 16.80
ATOM   5028  CG   LEU  737     -15.210   6.030  -0.320  1.00 13.20
ATOM   5029  CD1  LEU  737     -16.249   7.044  -0.807  1.00 13.79
ATOM   5030  CD2  LEU  737     -15.695   5.326   0.939  1.00 15.41
ATOM   5031  C    LEU  737     -13.776   2.993  -2.323  1.00 18.17
ATOM   5032  O    LEU  737     -12.963   3.040  -3.245  1.00 16.22
ATOM   5033  N    GLY  738     -14.715   2.060  -2.223  1.00 19.98
```

```
ATOM    5034  CA   GLY   738    -14.822    1.006   -3.209   1.00 22.29
ATOM    5035  C    GLY   738    -14.154   -0.215   -2.623   1.00 23.99
ATOM    5036  O    GLY   738    -14.432   -0.588   -1.487   1.00 23.25
ATOM    5037  N    LEU   739    -13.257   -0.822   -3.390   1.00 25.38
ATOM    5038  CA   LEU   739    -12.537   -1.999   -2.941   1.00 25.53
ATOM    5039  CB   LEU   739    -11.955   -2.731   -4.152   1.00 26.77
ATOM    5040  CG   LEU   739    -11.686   -4.230   -4.032   1.00 28.57
ATOM    5041  CD1  LEU   739    -10.971   -4.722   -5.291   1.00 29.59
ATOM    5042  CD2  LEU   739    -10.849   -4.508   -2.804   1.00 27.92
ATOM    5043  C    LEU   739    -11.413   -1.560   -1.998   1.00 26.90
ATOM    5044  O    LEU   739    -10.331   -1.173   -2.443   1.00 27.05
ATOM    5045  N    THR   740    -11.686   -1.605   -0.697   1.00 25.51
ATOM    5046  CA   THR   740    -10.708   -1.226    0.319   1.00 26.30
ATOM    5047  CB   THR   740    -11.399   -0.547    1.514   1.00 25.07
ATOM    5048  OG1  THR   740    -12.585   -1.272    1.852   1.00 26.66
ATOM    5049  CG2  THR   740    -11.783    0.886    1.170   1.00 28.04
ATOM    5050  C    THR   740     -9.986   -2.487    0.794   1.00 25.33
ATOM    5051  O    THR   740    -10.522   -3.252    1.594   1.00 26.61
ATOM    5052  N    PRO   741     -8.748   -2.704    0.312   1.00 25.06
ATOM    5053  CD   PRO   741     -8.001   -1.737   -0.510   1.00 26.23
ATOM    5054  CA   PRO   741     -7.909   -3.862    0.641   1.00 22.16
ATOM    5055  CB   PRO   741     -6.584   -3.542   -0.060   1.00 25.15
ATOM    5056  CG   PRO   741     -6.588   -2.048   -0.144   1.00 28.32
ATOM    5057  C    PRO   741     -7.736   -4.223    2.111   1.00 20.97
ATOM    5058  O    PRO   741     -7.560   -5.397    2.441   1.00 20.75
ATOM    5059  N    GLN   742     -7.783   -3.241    3.003   1.00 18.98
ATOM    5060  CA   GLN   742     -7.637   -3.556    4.425   1.00 18.22
ATOM    5061  CB   GLN   742     -7.516   -2.273    5.246   1.00 18.22
ATOM    5062  CG   GLN   742     -6.108   -1.698    5.237   1.00 19.20
ATOM    5063  CD   GLN   742     -6.037   -0.295    5.799   1.00 21.99
ATOM    5064  OE1  GLN   742     -6.773    0.056    6.722   1.00 23.77
ATOM    5065  NE2  GLN   742     -5.130    0.513    5.258   1.00 19.08
ATOM    5066  C    GLN   742     -8.813   -4.398    4.916   1.00 17.75
ATOM    5067  O    GLN   742     -8.659   -5.212    5.826   1.00 17.97
ATOM    5068  N    SER   743     -9.976   -4.209    4.296   1.00 18.05
ATOM    5069  CA   SER   743    -11.171   -4.950    4.673   1.00 17.66
ATOM    5070  CB   SER   743    -12.412   -4.063    4.535   1.00 19.22
ATOM    5071  OG   SER   743    -12.368   -2.992    5.473   1.00 19.51
ATOM    5072  C    SER   743    -11.347   -6.222    3.849   1.00 18.63
ATOM    5073  O    SER   743    -12.456   -6.742    3.725   1.00 19.29
ATOM    5074  N    VAL   744    -10.252   -6.733    3.291   1.00 17.52
ATOM    5075  CA   VAL   744    -10.320   -7.949    2.483   1.00 18.17
ATOM    5076  CB   VAL   744     -8.900   -8.422    2.066   1.00 20.91
ATOM    5077  CG1  VAL   744     -8.072   -8.777    3.294   1.00 20.41
ATOM    5078  CG2  VAL   744     -9.004   -9.617    1.126   1.00 21.66
ATOM    5079  C    VAL   744    -11.061   -9.087    3.206   1.00 18.57
ATOM    5080  O    VAL   744    -11.873   -9.786    2.594   1.00 17.85
ATOM    5081  N    ASN   745    -10.801   -9.267    4.501   1.00 18.34
ATOM    5082  CA   ASN   745    -11.451  -10.337    5.256   1.00 18.99
ATOM    5083  CB   ASN   745    -10.783  -10.501    6.624   1.00 18.10
ATOM    5084  CG   ASN   745     -9.306  -10.825    6.505   1.00 18.24
ATOM    5085  OD1  ASN   745     -8.931  -11.911    6.055   1.00 16.42
ATOM    5086  ND2  ASN   745     -8.462   -9.882    6.890   1.00 16.58
ATOM    5087  C    ASN   745    -12.947  -10.100    5.426   1.00 20.36
ATOM    5088  O    ASN   745    -13.718  -11.046    5.590   1.00 19.24
ATOM    5089  N    ILE   746    -13.352   -8.835    5.385   1.00 21.75
ATOM    5090  CA   ILE   746    -14.758   -8.474    5.512   1.00 24.03
ATOM    5091  CB   ILE   746    -14.928   -6.955    5.722   1.00 25.51
ATOM    5092  CG2  ILE   746    -16.393   -6.570    5.577   1.00 27.38
ATOM    5093  CG1  ILE   746    -14.406   -6.553    7.103   1.00 25.99
ATOM    5094  CD1  ILE   746    -15.274   -7.038    8.241   1.00 23.57
ATOM    5095  C    ILE   746    -15.481   -8.866    4.233   1.00 25.01
ATOM    5096  O    ILE   746    -16.510   -9.537    4.274   1.00 24.42
ATOM    5097  N    PHE   747    -14.927   -8.450    3.098   1.00 26.24
ATOM    5098  CA   PHE   747    -15.521   -8.743    1.796   1.00 27.97
ATOM    5099  CB   PHE   747    -14.900   -7.859    0.709   1.00 30.22
ATOM    5100  CG   PHE   747    -14.863   -6.396    1.056   1.00 33.12
ATOM    5101  CD1  PHE   747    -16.006   -5.739    1.504   1.00 34.45
ATOM    5102  CD2  PHE   747    -13.680   -5.672    0.924   1.00 34.85
ATOM    5103  CE1  PHE   747    -15.970   -4.380    1.819   1.00 35.58
ATOM    5104  CE2  PHE   747    -13.631   -4.313    1.235   1.00 35.40
ATOM    5105  CZ   PHE   747    -14.779   -3.668    1.683   1.00 35.63
ATOM    5106  C    PHE   747    -15.323  -10.203    1.412   1.00 29.09
ATOM    5107  O    PHE   747    -16.061  -10.742    0.587   1.00 28.25
ATOM    5108  N    GLY   748    -14.317  -10.837    2.006   1.00 29.00
ATOM    5109  CA   GLY   748    -14.042  -12.229    1.698   1.00 29.92
ATOM    5110  C    GLY   748    -13.185  -12.347    0.453   1.00 30.99
```

```
ATOM   5111  O    GLY   748    -13.228 -13.354   -0.253   1.00 33.17
ATOM   5112  N    GLY   749    -12.400 -11.309    0.184   1.00 30.50
ATOM   5113  CA   GLY   749    -11.539 -11.309   -0.985   1.00 31.40
ATOM   5114  C    GLY   749    -11.590  -9.973   -1.705   1.00 33.02
ATOM   5115  O    GLY   749    -12.279  -9.052   -1.269   1.00 31.79
ATOM   5116  N    TYR   750    -10.857  -9.862   -2.807   1.00 33.78
ATOM   5117  CA   TYR   750    -10.839  -8.626   -3.574   1.00 35.38
ATOM   5118  CB   TYR   750     -9.440  -8.377   -4.133   1.00 36.26
ATOM   5119  CG   TYR   750     -8.361  -8.445   -3.076   1.00 38.04
ATOM   5120  CD1  TYR   750     -7.861  -9.674   -2.639   1.00 39.14
ATOM   5121  CE1  TYR   750     -6.886  -9.742   -1.644   1.00 39.39
ATOM   5122  CD2  TYR   750     -7.858  -7.283   -2.490   1.00 38.52
ATOM   5123  CE2  TYR   750     -6.886  -7.339   -1.493   1.00 39.18
ATOM   5124  CZ   TYR   750     -6.404  -8.569   -1.077   1.00 39.42
ATOM   5125  OH   TYR   750     -5.441  -8.626   -0.095   1.00 39.23
ATOM   5126  C    TYR   750    -11.856  -8.715   -4.705   1.00 35.70
ATOM   5127  O    TYR   750    -11.591  -9.304   -5.753   1.00 36.41
ATOM   5128  N    LYS   751    -13.025  -8.127   -4.480   1.00 35.48
ATOM   5129  CA   LYS   751    -14.098  -8.156   -5.463   1.00 36.67
ATOM   5130  CB   LYS   751    -15.255  -8.989   -4.911   1.00 38.25
ATOM   5131  CG   LYS   751    -14.811 -10.343   -4.361   1.00 40.62
ATOM   5132  CD   LYS   751    -15.870 -10.976   -3.466   1.00 42.04
ATOM   5133  CE   LYS   751    -15.344 -12.243   -2.802   1.00 42.02
ATOM   5134  NZ   LYS   751    -16.334 -12.839   -1.854   1.00 42.38
ATOM   5135  C    LYS   751    -14.569  -6.741   -5.783   1.00 36.24
ATOM   5136  O    LYS   751    -14.371  -5.819   -4.993   1.00 36.25
ATOM   5137  N    VAL   752    -15.194  -6.573   -6.943   1.00 36.26
ATOM   5138  CA   VAL   752    -15.687  -5.264   -7.357   1.00 36.20
ATOM   5139  CB   VAL   752    -16.196  -5.296   -8.816   1.00 36.16
ATOM   5140  CG1  VAL   752    -16.794  -3.948   -9.191   1.00 36.40
ATOM   5141  CG2  VAL   752    -15.057  -5.641   -9.753   1.00 35.98
ATOM   5142  C    VAL   752    -16.826  -4.784   -6.461   1.00 36.45
ATOM   5143  O    VAL   752    -17.758  -5.533   -6.177   1.00 36.56
ATOM   5144  N    GLN   753    -16.740  -3.533   -6.018   1.00 36.02
ATOM   5145  CA   GLN   753    -17.772  -2.943   -5.169   1.00 36.40
ATOM   5146  CB   GLN   753    -17.156  -2.319   -3.915   1.00 37.30
ATOM   5147  CG   GLN   753    -17.031  -3.264   -2.730   1.00 42.36
ATOM   5148  CD   GLN   753    -15.996  -4.345   -2.946   1.00 44.63
ATOM   5149  OE1  GLN   753    -14.816  -4.055   -3.155   1.00 46.92
ATOM   5150  NE2  GLN   753    -16.428  -5.600   -2.889   1.00 44.11
ATOM   5151  C    GLN   753    -18.540  -1.875   -5.937   1.00 35.82
ATOM   5152  O    GLN   753    -18.138  -1.474   -7.028   1.00 34.76
ATOM   5153  N    GLY   754    -19.645  -1.417   -5.361   1.00 36.54
ATOM   5154  CA   GLY   754    -20.446  -0.397   -6.015   1.00 37.86
ATOM   5155  C    GLY   754    -21.571  -0.979   -6.848   1.00 38.80
ATOM   5156  O    GLY   754    -22.558  -0.301   -7.136   1.00 38.37
ATOM   5157  N    ARG   755    -21.413  -2.240   -7.237   1.00 40.53
ATOM   5158  CA   ARG   755    -22.405  -2.948   -8.037   1.00 42.45
ATOM   5159  CB   ARG   755    -22.018  -4.428   -8.145   1.00 43.43
ATOM   5160  CG   ARG   755    -20.750  -4.711   -8.951   1.00 44.60
ATOM   5161  CD   ARG   755    -21.069  -4.927  -10.423   1.00 44.87
ATOM   5162  NE   ARG   755    -19.883  -5.181  -11.242   1.00 44.38
ATOM   5163  CZ   ARG   755    -19.041  -6.196  -11.066   1.00 45.22
ATOM   5164  NH1  ARG   755    -19.240  -7.072  -10.090   1.00 45.18
ATOM   5165  NH2  ARG   755    -18.001  -6.343  -11.876   1.00 44.29
ATOM   5166  C    ARG   755    -23.788  -2.826   -7.399   1.00 42.83
ATOM   5167  O    ARG   755    -23.990  -3.237   -6.257   1.00 43.19
ATOM   5168  N    GLY   756    -24.734  -2.257   -8.139   1.00 43.66
ATOM   5169  CA   GLY   756    -26.079  -2.103   -7.616   1.00 44.45
ATOM   5170  C    GLY   756    -26.404  -0.696   -7.154   1.00 45.42
ATOM   5171  O    GLY   756    -25.510   0.087   -6.827   1.00 45.05
ATOM   5172  N    ASP   757    -27.693  -0.375   -7.123   1.00 45.36
ATOM   5173  CA   ASP   757    -28.151   0.944   -6.704   1.00 45.65
ATOM   5174  CB   ASP   757    -29.642   1.095   -7.011   1.00 48.39
ATOM   5175  CG   ASP   757    -29.954   0.882   -8.477   1.00 50.42
ATOM   5176  OD1  ASP   757    -29.426   1.648   -9.312   1.00 51.37
ATOM   5177  OD2  ASP   757    -30.725  -0.051   -8.795   1.00 51.94
ATOM   5178  C    ASP   757    -27.898   1.188   -5.219   1.00 43.87
ATOM   5179  O    ASP   757    -27.445   2.264   -4.827   1.00 43.00
ATOM   5180  N    GLU   758    -28.193   0.187   -4.396   1.00 42.25
ATOM   5181  CA   GLU   758    -27.988   0.303   -2.956   1.00 41.44
ATOM   5182  CB   GLU   758    -28.338  -1.013   -2.260   1.00 43.32
ATOM   5183  CG   GLU   758    -28.241  -0.945   -0.744   1.00 47.39
ATOM   5184  CD   GLU   758    -27.797  -2.259   -0.123   1.00 49.85
ATOM   5185  OE1  GLU   758    -28.446  -3.298   -0.389   1.00 50.43
ATOM   5186  OE2  GLU   758    -26.796  -2.248    0.632   1.00 50.64
ATOM   5187  C    GLU   758    -26.532   0.653   -2.653   1.00 39.44
```

```
ATOM   5188  O   GLU  758    -26.242   1.628  -1.956  1.00 37.55
ATOM   5189  N   ALA  759    -25.622  -0.160  -3.180  1.00 37.40
ATOM   5190  CA  ALA  759    -24.191   0.037  -2.981  1.00 34.93
ATOM   5191  CB  ALA  759    -23.420  -1.141  -3.568  1.00 35.45
ATOM   5192  C   ALA  759    -23.735   1.332  -3.639  1.00 33.03
ATOM   5193  O   ALA  759    -22.993   2.114  -3.045  1.00 31.60
ATOM   5194  N   GLY  760    -24.182   1.541  -4.873  1.00 31.34
ATOM   5195  CA  GLY  760    -23.819   2.735  -5.610  1.00 29.95
ATOM   5196  C   GLY  760    -24.143   4.016  -4.868  1.00 29.45
ATOM   5197  O   GLY  760    -23.272   4.866  -4.684  1.00 28.24
ATOM   5198  N   ASP  761    -25.396   4.152  -4.440  1.00 28.80
ATOM   5199  CA  ASP  761    -25.840   5.335  -3.714  1.00 28.80
ATOM   5200  CB  ASP  761    -27.343   5.248  -3.415  1.00 29.11
ATOM   5201  CG  ASP  761    -28.193   5.146  -4.676  1.00 29.37
ATOM   5202  OD1 ASP  761    -27.664   5.376  -5.782  1.00 29.25
ATOM   5203  OD2 ASP  761    -29.400   4.845  -4.556  1.00 31.42
ATOM   5204  C   ASP  761    -25.070   5.494  -2.410  1.00 28.23
ATOM   5205  O   ASP  761    -24.802   6.612  -1.960  1.00 26.71
ATOM   5206  N   GLN  762    -24.717   4.369  -1.798  1.00 28.59
ATOM   5207  CA  GLN  762    -23.970   4.396  -0.546  1.00 28.32
ATOM   5208  CB  GLN  762    -23.858   2.988   0.040  1.00 30.23
ATOM   5209  CG  GLN  762    -23.020   2.931   1.305  1.00 32.27
ATOM   5210  CD  GLN  762    -23.535   3.860   2.378  1.00 33.99
ATOM   5211  OE1 GLN  762    -24.663   3.718   2.852  1.00 36.79
ATOM   5212  NE2 GLN  762    -22.712   4.825   2.767  1.00 35.03
ATOM   5213  C   GLN  762    -22.571   4.973  -0.754  1.00 26.19
ATOM   5214  O   GLN  762    -22.091   5.757   0.065  1.00 24.24
ATOM   5215  N   LEU  763    -21.917   4.578  -1.842  1.00 25.52
ATOM   5216  CA  LEU  763    -20.575   5.078  -2.135  1.00 25.74
ATOM   5217  CB  LEU  763    -19.971   4.340  -3.337  1.00 28.01
ATOM   5218  CG  LEU  763    -19.364   2.960  -3.070  1.00 30.99
ATOM   5219  CD1 LEU  763    -18.850   2.357  -4.373  1.00 31.68
ATOM   5220  CD2 LEU  763    -18.224   3.087  -2.071  1.00 30.71
ATOM   5221  C   LEU  763    -20.602   6.576  -2.416  1.00 24.34
ATOM   5222  O   LEU  763    -19.725   7.319  -1.974  1.00 20.25
ATOM   5223  N   LEU  764    -21.616   7.013  -3.154  1.00 24.14
ATOM   5224  CA  LEU  764    -21.761   8.424  -3.488  1.00 24.45
ATOM   5225  CB  LEU  764    -22.988   8.633  -4.380  1.00 24.40
ATOM   5226  CG  LEU  764    -22.910   9.711  -5.461  1.00 26.78
ATOM   5227  CD1 LEU  764    -24.307   9.955  -6.006  1.00 27.16
ATOM   5228  CD2 LEU  764    -22.323  10.988  -4.906  1.00 26.33
ATOM   5229  C   LEU  764    -21.926   9.216  -2.192  1.00 22.36
ATOM   5230  O   LEU  764    -21.257  10.225  -1.978  1.00 21.39
ATOM   5231  N   SER  765    -22.823   8.748  -1.330  1.00 22.67
ATOM   5232  CA  SER  765    -23.064   9.415  -0.055  1.00 21.77
ATOM   5233  CB  SER  765    -24.134   8.676   0.745  1.00 21.69
ATOM   5234  OG  SER  765    -24.403   9.355   1.955  1.00 24.43
ATOM   5235  C   SER  765    -21.779   9.486   0.766  1.00 20.68
ATOM   5236  O   SER  765    -21.459  10.527   1.337  1.00 18.30
ATOM   5237  N   ASP  766    -21.050   8.373   0.832  1.00 19.16
ATOM   5238  CA  ASP  766    -19.801   8.338   1.585  1.00 19.55
ATOM   5239  CB  ASP  766    -19.213   6.917   1.623  1.00 19.61
ATOM   5240  CG  ASP  766    -19.907   6.011   2.643  1.00 23.80
ATOM   5241  OD1 ASP  766    -20.473   6.524   3.632  1.00 20.16
ATOM   5242  OD2 ASP  766    -19.863   4.774   2.458  1.00 24.88
ATOM   5243  C   ASP  766    -18.768   9.295   0.993  1.00 17.74
ATOM   5244  O   ASP  766    -18.074   9.998   1.727  1.00 17.68
ATOM   5245  N   ALA  767    -18.666   9.321  -0.332  1.00 18.82
ATOM   5246  CA  ALA  767    -17.708  10.200  -0.993  1.00 18.71
ATOM   5247  CB  ALA  767    -17.759   9.992  -2.501  1.00 18.07
ATOM   5248  C   ALA  767    -17.992  11.658  -0.647  1.00 18.35
ATOM   5249  O   ALA  767    -17.081  12.408  -0.289  1.00 17.25
ATOM   5250  N   LEU  768    -19.260  12.052  -0.745  1.00 18.76
ATOM   5251  CA  LEU  768    -19.674  13.421  -0.437  1.00 18.68
ATOM   5252  CB  LEU  768    -21.150  13.617  -0.796  1.00 19.27
ATOM   5253  CG  LEU  768    -21.490  13.710  -2.291  1.00 19.38
ATOM   5254  CD1 LEU  768    -22.991  13.530  -2.498  1.00 18.38
ATOM   5255  CD2 LEU  768    -21.036  15.068  -2.823  1.00 21.35
ATOM   5256  C   LEU  768    -19.465  13.744   1.033  1.00 18.16
ATOM   5257  O   LEU  768    -19.127  14.878   1.392  1.00 18.53
ATOM   5258  N   ALA  769    -19.669  12.746   1.886  1.00 15.98
ATOM   5259  CA  ALA  769    -19.502  12.936   3.319  1.00 15.17
ATOM   5260  CB  ALA  769    -20.038  11.726   4.069  1.00 17.07
ATOM   5261  C   ALA  769    -18.033  13.166   3.661  1.00 14.89
ATOM   5262  O   ALA  769    -17.714  13.986   4.519  1.00 16.01
ATOM   5263  N   LEU  770    -17.146  12.445   2.979  1.00 13.79
ATOM   5264  CA  LEU  770    -15.710  12.577   3.211  1.00 14.28
```

```
ATOM   5265  CB   LEU   770    -14.947  11.464   2.482  1.00 13.69
ATOM   5266  CG   LEU   770    -15.159  10.031   3.022  1.00 14.90
ATOM   5267  CD1  LEU   770    -14.652   8.989   2.028  1.00 14.19
ATOM   5268  CD2  LEU   770    -14.439   9.898   4.346  1.00 14.20
ATOM   5269  C    LEU   770    -15.250  13.940   2.713  1.00 14.23
ATOM   5270  O    LEU   770    -14.387  14.585   3.319  1.00 15.29
ATOM   5271  N    GLU   771    -15.826  14.385   1.601  1.00 15.62
ATOM   5272  CA   GLU   771    -15.457  15.685   1.049  1.00 14.95
ATOM   5273  CB   GLU   771    -16.126  15.892  -0.311  1.00 13.82
ATOM   5274  CG   GLU   771    -15.885  17.276  -0.887  1.00 14.20
ATOM   5275  CD   GLU   771    -16.600  17.471  -2.201  1.00 16.87
ATOM   5276  OE1  GLU   771    -17.837  17.270  -2.243  1.00 16.35
ATOM   5277  OE2  GLU   771    -15.931  17.824  -3.184  1.00 16.38
ATOM   5278  C    GLU   771    -15.874  16.793   2.015  1.00 15.89
ATOM   5279  O    GLU   771    -15.097  17.714   2.301  1.00 15.83
ATOM   5280  N    ALA   772    -17.104  16.696   2.512  1.00 15.87
ATOM   5281  CA   ALA   772    -17.653  17.677   3.449  1.00 17.16
ATOM   5282  CB   ALA   772    -19.133  17.384   3.695  1.00 16.98
ATOM   5283  C    ALA   772    -16.896  17.678   4.776  1.00 18.66
ATOM   5284  O    ALA   772    -16.855  18.695   5.472  1.00 17.21
ATOM   5285  N    ALA   773    -16.294  16.537   5.115  1.00 18.43
ATOM   5286  CA   ALA   773    -15.536  16.392   6.358  1.00 18.51
ATOM   5287  CB   ALA   773    -15.359  14.909   6.690  1.00 17.94
ATOM   5288  C    ALA   773    -14.170  17.067   6.265  1.00 17.57
ATOM   5289  O    ALA   773    -13.539  17.358   7.284  1.00 19.73
ATOM   5290  N    GLY   774    -13.714  17.309   5.040  1.00 18.75
ATOM   5291  CA   GLY   774    -12.424  17.954   4.853  1.00 16.12
ATOM   5292  C    GLY   774    -11.451  17.251   3.913  1.00 15.01
ATOM   5293  O    GLY   774    -10.395  17.797   3.600  1.00 13.07
ATOM   5294  N    ALA   775    -11.786  16.048   3.451  1.00 15.01
ATOM   5295  CA   ALA   775    -10.893  15.326   2.546  1.00 15.38
ATOM   5296  CB   ALA   775    -11.513  13.990   2.134  1.00 15.63
ATOM   5297  C    ALA   775    -10.610  16.171   1.308  1.00 15.18
ATOM   5298  O    ALA   775    -11.534  16.705   0.708  1.00 14.76
ATOM   5299  N    GLN   776     -9.337  16.270   0.924  1.00 14.50
ATOM   5300  CA   GLN   776     -8.934  17.071  -0.230  1.00 15.43
ATOM   5301  CB   GLN   776     -7.695  17.893   0.129  1.00 15.10
ATOM   5302  CG   GLN   776     -7.928  18.846   1.283  1.00 18.62
ATOM   5303  CD   GLN   776     -6.658  19.513   1.747  1.00 18.59
ATOM   5304  OE1  GLN   776     -6.002  20.221   0.984  1.00 24.99
ATOM   5305  NE2  GLN   776     -6.305  19.298   3.007  1.00 21.94
ATOM   5306  C    GLN   776     -8.657  16.233  -1.474  1.00 15.17
ATOM   5307  O    GLN   776     -8.344  16.765  -2.537  1.00 14.62
ATOM   5308  N    LEU   777     -8.767  14.918  -1.330  1.00 15.85
ATOM   5309  CA   LEU   777     -8.547  13.990  -2.429  1.00 15.20
ATOM   5310  CB   LEU   777     -7.057  13.673  -2.562  1.00 16.16
ATOM   5311  CG   LEU   777     -6.264  14.319  -3.689  1.00 22.07
ATOM   5312  CD1  LEU   777     -4.776  13.947  -3.529  1.00 20.46
ATOM   5313  CD2  LEU   777     -6.792  13.831  -5.042  1.00 23.78
ATOM   5314  C    LEU   777     -9.316  12.710  -2.125  1.00 15.07
ATOM   5315  O    LEU   777     -9.600  12.419  -0.966  1.00 12.13
ATOM   5316  N    LEU   778     -9.654  11.954  -3.163  1.00 13.83
ATOM   5317  CA   LEU   778    -10.375  10.701  -2.979  1.00 14.56
ATOM   5318  CB   LEU   778    -11.891  10.887  -3.176  1.00 14.01
ATOM   5319  CG   LEU   778    -12.722   9.593  -3.192  1.00 14.97
ATOM   5320  CD1  LEU   778    -12.716   8.948  -1.806  1.00 15.87
ATOM   5321  CD2  LEU   778    -14.150   9.893  -3.609  1.00 13.98
ATOM   5322  C    LEU   778     -9.892   9.647  -3.955  1.00 15.86
ATOM   5323  O    LEU   778     -9.731   9.913  -5.150  1.00 16.74
ATOM   5324  N    VAL   779     -9.639   8.450  -3.440  1.00 14.91
ATOM   5325  CA   VAL   779     -9.235   7.348  -4.295  1.00 15.20
ATOM   5326  CB   VAL   779     -8.057   6.528  -3.694  1.00 15.02
ATOM   5327  CG1  VAL   779     -7.850   5.242  -4.509  1.00 14.33
ATOM   5328  CG2  VAL   779     -6.774   7.354  -3.730  1.00 15.87
ATOM   5329  C    VAL   779    -10.465   6.453  -4.416  1.00 15.26
ATOM   5330  O    VAL   779    -11.171   6.222  -3.430  1.00 14.26
ATOM   5331  N    LEU   780    -10.725   5.982  -5.632  1.00 16.87
ATOM   5332  CA   LEU   780    -11.854   5.094  -5.928  1.00 18.23
ATOM   5333  CB   LEU   780    -12.807   5.737  -6.937  1.00 20.90
ATOM   5334  CG   LEU   780    -14.160   6.196  -6.413  1.00 24.41
ATOM   5335  CD1  LEU   780    -15.027   6.667  -7.586  1.00 22.61
ATOM   5336  CD2  LEU   780    -14.841   5.046  -5.677  1.00 24.16
ATOM   5337  C    LEU   780    -11.263   3.841  -6.535  1.00 17.70
ATOM   5338  O    LEU   780    -10.617   3.912  -7.580  1.00 18.28
ATOM   5339  N    GLU   781    -11.485   2.693  -5.895  1.00 17.11
ATOM   5340  CA   GLU   781    -10.913   1.434  -6.386  1.00 18.49
ATOM   5341  CB   GLU   781     -9.972   0.857  -5.314  1.00 19.29
```

```
ATOM   5342  CG   GLU   781    -9.242  -0.416  -5.728  1.00 19.49
ATOM   5343  CD   GLU   781    -8.175  -0.831  -4.738  1.00 23.53
ATOM   5344  OE1  GLU   781    -7.901  -0.070  -3.781  1.00 21.13
ATOM   5345  OE2  GLU   781    -7.597  -1.925  -4.921  1.00 25.81
ATOM   5346  C    GLU   781   -11.930   0.370  -6.808  1.00 20.03
ATOM   5347  O    GLU   781   -12.883   0.091  -6.088  1.00 21.13
ATOM   5348  N    CYS   782   -11.701  -0.207  -7.986  1.00 21.54
ATOM   5349  CA   CYS   782   -12.535  -1.260  -8.555  1.00 22.35
ATOM   5350  CB   CYS   782   -12.071  -2.623  -8.037  1.00 22.48
ATOM   5351  SG   CYS   782   -10.365  -2.991  -8.514  1.00 23.47
ATOM   5352  C    CYS   782   -14.024  -1.076  -8.314  1.00 23.36
ATOM   5353  O    CYS   782   -14.639  -1.733  -7.469  1.00 22.95
ATOM   5354  N    VAL   783   -14.586  -0.163  -9.088  1.00 23.52
ATOM   5355  CA   VAL   783   -15.988   0.173  -9.016  1.00 26.91
ATOM   5356  CB   VAL   783   -16.170   1.481  -8.199  1.00 28.96
ATOM   5357  CG1  VAL   783   -15.616   2.665  -8.975  1.00 29.79
ATOM   5358  CG2  VAL   783   -17.622   1.687  -7.843  1.00 32.62
ATOM   5359  C    VAL   783   -16.434   0.360 -10.467  1.00 26.23
ATOM   5360  O    VAL   783   -15.628   0.711 -11.326  1.00 26.43
ATOM   5361  N    PRO   784   -17.711   0.083 -10.770  1.00 26.23
ATOM   5362  CD   PRO   784   -18.792  -0.423  -9.913  1.00 27.16
ATOM   5363  CA   PRO   784   -18.177   0.256 -12.149  1.00 26.47
ATOM   5364  CB   PRO   784   -19.671  -0.087 -12.060  1.00 25.76
ATOM   5365  CG   PRO   784   -20.008   0.120 -10.612  1.00 27.94
ATOM   5366  C    PRO   784   -17.908   1.675 -12.644  1.00 26.66
ATOM   5367  O    PRO   784   -18.053   2.640 -11.893  1.00 27.09
ATOM   5368  N    VAL   785   -17.509   1.788 -13.906  1.00 26.20
ATOM   5369  CA   VAL   785   -17.191   3.075 -14.512  1.00 26.42
ATOM   5370  CB   VAL   785   -16.897   2.922 -16.014  1.00 26.52
ATOM   5371  CG1  VAL   785   -16.455   4.253 -16.602  1.00 27.04
ATOM   5372  CG2  VAL   785   -15.821   1.878 -16.221  1.00 26.53
ATOM   5373  C    VAL   785   -18.287   4.111 -14.343  1.00 26.76
ATOM   5374  O    VAL   785   -18.021   5.244 -13.939  1.00 23.64
ATOM   5375  N    GLU   786   -19.519   3.728 -14.664  1.00 26.86
ATOM   5376  CA   GLU   786   -20.639   4.648 -14.542  1.00 26.47
ATOM   5377  CB   GLU   786   -21.953   3.966 -14.959  1.00 29.51
ATOM   5378  CG   GLU   786   -21.954   2.441 -14.909  1.00 33.26
ATOM   5379  CD   GLU   786   -21.024   1.816 -15.941  1.00 33.35
ATOM   5380  OE1  GLU   786   -21.069   2.234 -17.115  1.00 35.72
ATOM   5381  OE2  GLU   786   -20.257   0.900 -15.578  1.00 36.70
ATOM   5382  C    GLU   786   -20.752   5.203 -13.125  1.00 25.75
ATOM   5383  O    GLU   786   -21.142   6.352 -12.934  1.00 25.18
ATOM   5384  N    LEU   787   -20.400   4.396 -12.130  1.00 25.85
ATOM   5385  CA   LEU   787   -20.470   4.854 -10.749  1.00 24.33
ATOM   5386  CB   LEU   787   -20.375   3.662  -9.797  1.00 27.24
ATOM   5387  CG   LEU   787   -20.739   3.896  -8.330  1.00 29.42
ATOM   5388  CD1  LEU   787   -20.937   2.553  -7.652  1.00 30.34
ATOM   5389  CD2  LEU   787   -19.666   4.691  -7.632  1.00 30.31
ATOM   5390  C    LEU   787   -19.338   5.846 -10.481  1.00 24.18
ATOM   5391  O    LEU   787   -19.519   6.834  -9.764  1.00 21.41
ATOM   5392  N    ALA   788   -18.171   5.579 -11.062  1.00 23.68
ATOM   5393  CA   ALA   788   -17.019   6.456 -10.895  1.00 23.32
ATOM   5394  CB   ALA   788   -15.794   5.843 -11.564  1.00 21.55
ATOM   5395  C    ALA   788   -17.337   7.817 -11.510  1.00 23.99
ATOM   5396  O    ALA   788   -16.890   8.855 -11.020  1.00 23.15
ATOM   5397  N    LYS   789   -18.117   7.808 -12.586  1.00 25.42
ATOM   5398  CA   LYS   789   -18.495   9.050 -13.254  1.00 25.60
ATOM   5399  CB   LYS   789   -19.273   8.758 -14.537  1.00 29.58
ATOM   5400  CG   LYS   789   -18.679   7.660 -15.392  1.00 34.03
ATOM   5401  CD   LYS   789   -19.410   7.537 -16.722  1.00 37.45
ATOM   5402  CE   LYS   789   -18.909   6.342 -17.513  1.00 37.98
ATOM   5403  NZ   LYS   789   -19.397   6.370 -18.912  1.00 39.55
ATOM   5404  C    LYS   789   -19.365   9.883 -12.323  1.00 24.36
ATOM   5405  O    LYS   789   -19.124  11.074 -12.140  1.00 23.55
ATOM   5406  N    ARG   790   -20.380   9.254 -11.737  1.00 23.75
ATOM   5407  CA   ARG   790   -21.275   9.959 -10.824  1.00 23.75
ATOM   5408  CB   ARG   790   -22.320   9.011 -10.229  1.00 26.20
ATOM   5409  CG   ARG   790   -23.400   8.564 -11.192  1.00 31.43
ATOM   5410  CD   ARG   790   -24.747   8.502 -10.483  1.00 34.23
ATOM   5411  NE   ARG   790   -24.766   7.564  -9.362  1.00 33.07
ATOM   5412  CZ   ARG   790   -25.553   7.694  -8.297  1.00 35.30
ATOM   5413  NH1  ARG   790   -26.380   8.725  -8.205  1.00 37.31
ATOM   5414  NH2  ARG   790   -25.525   6.793  -7.323  1.00 35.56
ATOM   5415  C    ARG   790   -20.510  10.612  -9.680  1.00 22.42
ATOM   5416  O    ARG   790   -20.752  11.767  -9.329  1.00 20.30
ATOM   5417  N    ILE   791   -19.584   9.864  -9.098  1.00 20.17
ATOM   5418  CA   ILE   791   -18.811  10.374  -7.979  1.00 18.67
```

```
ATOM   5419  CB   ILE   791   -17.999    9.232   -7.310  1.00 18.12
ATOM   5420  CG2  ILE   791   -16.996    9.802   -6.317  1.00 16.97
ATOM   5421  CG1  ILE   791   -18.971    8.276   -6.599  1.00 20.08
ATOM   5422  CD1  ILE   791   -18.299    7.133   -5.849  1.00 23.20
ATOM   5423  C    ILE   791   -17.883   11.504   -8.402  1.00 15.86
ATOM   5424  O    ILE   791   -17.806   12.533   -7.732  1.00 15.97
ATOM   5425  N    THR   792   -17.192   11.315   -9.519  1.00 17.74
ATOM   5426  CA   THR   792   -16.271   12.326  -10.014  1.00 19.29
ATOM   5427  CB   THR   792   -15.511   11.819  -11.242  1.00 19.17
ATOM   5428  OG1  THR   792   -14.779   10.636  -10.890  1.00 17.58
ATOM   5429  CG2  THR   792   -14.539   12.879  -11.737  1.00 18.00
ATOM   5430  C    THR   792   -17.004   13.622  -10.360  1.00 20.60
ATOM   5431  O    THR   792   -16.476   14.712  -10.145  1.00 20.78
ATOM   5432  N    GLU   793   -18.216   13.509  -10.891  1.00 20.13
ATOM   5433  CA   GLU   793   -18.971   14.706  -11.236  1.00 21.99
ATOM   5434  CB   GLU   793   -20.014   14.392  -12.307  1.00 24.27
ATOM   5435  CG   GLU   793   -19.412   13.848  -13.589  1.00 27.80
ATOM   5436  CD   GLU   793   -20.427   13.745  -14.703  1.00 31.99
ATOM   5437  OE1  GLU   793   -21.513   13.160  -14.477  1.00 33.12
ATOM   5438  OE2  GLU   793   -20.135   14.243  -15.808  1.00 34.84
ATOM   5439  C    GLU   793   -19.654   15.337  -10.023  1.00 21.66
ATOM   5440  O    GLU   793   -19.869   16.546   -9.990  1.00 22.52
ATOM   5441  N    ALA   794   -19.990   14.528   -9.023  1.00 20.04
ATOM   5442  CA   ALA   794   -20.648   15.054   -7.832  1.00 19.93
ATOM   5443  CB   ALA   794   -21.394   13.936   -7.102  1.00 21.36
ATOM   5444  C    ALA   794   -19.679   15.739   -6.868  1.00 20.03
ATOM   5445  O    ALA   794   -20.088   16.572   -6.064  1.00 20.59
ATOM   5446  N    LEU   795   -18.399   15.396   -6.940  1.00 19.04
ATOM   5447  CA   LEU   795   -17.424   15.990   -6.034  1.00 17.59
ATOM   5448  CB   LEU   795   -16.488   14.910   -5.483  1.00 20.28
ATOM   5449  CG   LEU   795   -17.098   13.760   -4.674  1.00 23.20
ATOM   5450  CD1  LEU   795   -15.962   12.889   -4.142  1.00 22.33
ATOM   5451  CD2  LEU   795   -17.934   14.285   -3.527  1.00 26.37
ATOM   5452  C    LEU   795   -16.586   17.098   -6.657  1.00 15.79
ATOM   5453  O    LEU   795   -16.268   17.065   -7.846  1.00 16.54
ATOM   5454  N    ALA   796   -16.227   18.082   -5.840  1.00 15.08
ATOM   5455  CA   ALA   796   -15.404   19.185   -6.310  1.00 15.70
ATOM   5456  CB   ALA   796   -15.684   20.435   -5.494  1.00 15.40
ATOM   5457  C    ALA   796   -13.936   18.789   -6.193  1.00 14.51
ATOM   5458  O    ALA   796   -13.108   19.193   -7.008  1.00 13.29
ATOM   5459  N    ILE   797   -13.617   17.989   -5.175  1.00 14.50
ATOM   5460  CA   ILE   797   -12.243   17.546   -4.972  1.00 13.86
ATOM   5461  CB   ILE   797   -12.029   16.916   -3.560  1.00 14.10
ATOM   5462  CG2  ILE   797   -12.315   17.932   -2.488  1.00 13.02
ATOM   5463  CG1  ILE   797   -12.932   15.694   -3.365  1.00 15.07
ATOM   5464  CD1  ILE   797   -12.592   14.909   -2.090  1.00 16.44
ATOM   5465  C    ILE   797   -11.862   16.526   -6.034  1.00 12.69
ATOM   5466  O    ILE   797   -12.720   15.843   -6.595  1.00 14.87
ATOM   5467  N    PRO   798   -10.565   16.419   -6.340  1.00 14.26
ATOM   5468  CD   PRO   798    -9.444   17.299   -5.974  1.00 15.87
ATOM   5469  CA   PRO   798   -10.181   15.446   -7.359  1.00 13.35
ATOM   5470  CB   PRO   798    -8.720   15.796   -7.660  1.00 15.01
ATOM   5471  CG   PRO   798    -8.256   16.532   -6.455  1.00 18.28
ATOM   5472  C    PRO   798   -10.377   14.004   -6.920  1.00 13.85
ATOM   5473  O    PRO   798   -10.202   13.665   -5.745  1.00 12.45
ATOM   5474  N    VAL   799   -10.764   13.169   -7.879  1.00 13.99
ATOM   5475  CA   VAL   799   -10.992   11.750   -7.633  1.00 15.13
ATOM   5476  CB   VAL   799   -12.432   11.349   -8.019  1.00 16.02
ATOM   5477  CG1  VAL   799   -12.605    9.845   -7.864  1.00 14.52
ATOM   5478  CG2  VAL   799   -13.422   12.080   -7.119  1.00 14.06
ATOM   5479  C    VAL   799    -9.994   10.941   -8.439  1.00 14.87
ATOM   5480  O    VAL   799    -9.949   11.029   -9.663  1.00 15.59
ATOM   5481  N    ILE   800    -9.186   10.162   -7.731  1.00 14.30
ATOM   5482  CA   ILE   800    -8.170    9.335   -8.350  1.00 14.45
ATOM   5483  CB   ILE   800    -6.861    9.375   -7.528  1.00 15.69
ATOM   5484  CG2  ILE   800    -5.830    8.414   -8.128  1.00 14.51
ATOM   5485  CG1  ILE   800    -6.315   10.810   -7.524  1.00 15.10
ATOM   5486  CD1  ILE   800    -5.074   11.021   -6.676  1.00 17.30
ATOM   5487  C    ILE   800    -8.691    7.911   -8.429  1.00 14.61
ATOM   5488  O    ILE   800    -9.113    7.334   -7.424  1.00 13.66
ATOM   5489  N    GLY   801    -8.672    7.349   -9.629  1.00 13.09
ATOM   5490  CA   GLY   801    -9.178    6.005   -9.783  1.00 12.12
ATOM   5491  C    GLY   801    -8.151    4.935  -10.061  1.00 13.23
ATOM   5492  O    GLY   801    -7.055    5.200  -10.549  1.00 12.71
ATOM   5493  N    ILE   802    -8.522    3.713   -9.703  1.00 14.81
ATOM   5494  CA   ILE   802    -7.712    2.533   -9.954  1.00 16.00
ATOM   5495  CB   ILE   802    -6.799    2.164   -8.739  1.00 15.76
```

```
ATOM    5496  CG2 ILE   802      -7.575    2.202   -7.439  1.00 18.40
ATOM    5497  CG1 ILE   802      -6.172    0.792   -8.967  1.00 20.03
ATOM    5498  CD1 ILE   802      -5.323    0.706  -10.195  1.00 20.86
ATOM    5499  C   ILE   802      -8.773    1.468  -10.223  1.00 15.80
ATOM    5500  O   ILE   802      -9.548    1.112   -9.343  1.00 16.52
ATOM    5501  N   GLY   803      -8.831    1.008  -11.466  1.00 18.14
ATOM    5502  CA  GLY   803      -9.826    0.024  -11.834  1.00 18.81
ATOM    5503  C   GLY   803     -11.211    0.649  -11.819  1.00 19.32
ATOM    5504  O   GLY   803     -12.206   -0.041  -11.600  1.00 20.70
ATOM    5505  N   ALA   804     -11.278    1.957  -12.049  1.00 17.72
ATOM    5506  CA  ALA   804     -12.544    2.676  -12.048  1.00 18.13
ATOM    5507  CB  ALA   804     -12.547    3.719  -10.922  1.00 16.05
ATOM    5508  C   ALA   804     -12.834    3.359  -13.382  1.00 17.22
ATOM    5509  O   ALA   804     -13.727    4.205  -13.478  1.00 19.29
ATOM    5510  N   GLY   805     -12.079    2.999  -14.412  1.00 17.74
ATOM    5511  CA  GLY   805     -12.289    3.595  -15.718  1.00 19.47
ATOM    5512  C   GLY   805     -11.524    4.893  -15.885  1.00 19.16
ATOM    5513  O   GLY   805     -10.832    5.336  -14.964  1.00 19.03
ATOM    5514  N   ASN   806     -11.646    5.509  -17.057  1.00 17.88
ATOM    5515  CA  ASN   806     -10.939    6.760  -17.324  1.00 18.23
ATOM    5516  CB  ASN   806     -10.410    6.784  -18.769  1.00 16.49
ATOM    5517  CG  ASN   806     -11.511    6.953  -19.810  1.00 18.05
ATOM    5518  OD1 ASN   806     -11.225    7.247  -20.972  1.00 19.59
ATOM    5519  ND2 ASN   806     -12.767    6.760  -19.404  1.00 12.05
ATOM    5520  C   ASN   806     -11.774    8.006  -17.062  1.00 18.00
ATOM    5521  O   ASN   806     -11.411    9.091  -17.497  1.00 18.99
ATOM    5522  N   VAL   807     -12.872    7.848  -16.331  1.00 17.63
ATOM    5523  CA  VAL   807     -13.756    8.965  -16.033  1.00 19.39
ATOM    5524  CB  VAL   807     -15.205    8.489  -15.860  1.00 21.52
ATOM    5525  CG1 VAL   807     -16.140    9.685  -15.847  1.00 27.73
ATOM    5526  CG2 VAL   807     -15.578    7.547  -16.990  1.00 24.38
ATOM    5527  C   VAL   807     -13.354    9.738  -14.783  1.00 18.27
ATOM    5528  O   VAL   807     -13.941   10.770  -14.478  1.00 16.18
ATOM    5529  N   THR   808     -12.361    9.237  -14.057  1.00 18.22
ATOM    5530  CA  THR   808     -11.899    9.915  -12.854  1.00 14.60
ATOM    5531  CB  THR   808     -11.203    8.920  -11.885  1.00 16.31
ATOM    5532  OG1 THR   808     -10.153    8.222  -12.567  1.00 14.17
ATOM    5533  CG2 THR   808     -12.215    7.923  -11.346  1.00 12.82
ATOM    5534  C   THR   808     -10.944   11.044  -13.250  1.00 16.13
ATOM    5535  O   THR   808     -10.476   11.103  -14.390  1.00 16.23
ATOM    5536  N   ASP   809     -10.675   11.948  -12.312  1.00 15.76
ATOM    5537  CA  ASP   809      -9.790   13.086  -12.556  1.00 15.32
ATOM    5538  CB  ASP   809      -9.912   14.095  -11.405  1.00 14.96
ATOM    5539  CG  ASP   809     -11.332   14.591  -11.221  1.00 15.54
ATOM    5540  OD1 ASP   809     -11.890   15.153  -12.191  1.00 17.46
ATOM    5541  OD2 ASP   809     -11.897   14.428  -10.126  1.00 17.01
ATOM    5542  C   ASP   809      -8.342   12.633  -12.691  1.00 15.52
ATOM    5543  O   ASP   809      -7.535   13.266  -13.379  1.00 14.60
ATOM    5544  N   GLY   810      -8.021   11.528  -12.031  1.00 15.18
ATOM    5545  CA  GLY   810      -6.673   11.011  -12.089  1.00 15.09
ATOM    5546  C   GLY   810      -6.630    9.501  -12.037  1.00 14.54
ATOM    5547  O   GLY   810      -7.656    8.831  -11.914  1.00 14.65
ATOM    5548  N   GLN   811      -5.424    8.964  -12.115  1.00 14.84
ATOM    5549  CA  GLN   811      -5.242    7.528  -12.093  1.00 14.60
ATOM    5550  CB  GLN   811      -4.929    7.035  -13.506  1.00 15.54
ATOM    5551  CG  GLN   811      -6.026    7.268  -14.523  1.00 16.05
ATOM    5552  CD  GLN   811      -7.254    6.423  -14.248  1.00 14.86
ATOM    5553  OE1 GLN   811      -7.145    5.274  -13.812  1.00 15.67
ATOM    5554  NE2 GLN   811      -8.428    6.982  -14.513  1.00 13.00
ATOM    5555  C   GLN   811      -4.095    7.146  -11.173  1.00 16.44
ATOM    5556  O   GLN   811      -3.179    7.933  -10.940  1.00 12.57
ATOM    5557  N   ILE   812      -4.151    5.932  -10.648  1.00 18.01
ATOM    5558  CA  ILE   812      -3.080    5.448   -9.795  1.00 21.55
ATOM    5559  CB  ILE   812      -3.394    5.680   -8.286  1.00 22.97
ATOM    5560  CG2 ILE   812      -4.477    4.732   -7.810  1.00 24.22
ATOM    5561  CG1 ILE   812      -2.116    5.495   -7.461  1.00 26.66
ATOM    5562  CD1 ILE   812      -2.168    6.141   -6.077  1.00 27.37
ATOM    5563  C   ILE   812      -2.880    3.968  -10.098  1.00 23.39
ATOM    5564  O   ILE   812      -3.781    3.292  -10.599  1.00 22.15
ATOM    5565  N   LEU   813      -1.678    3.478   -9.832  1.00 25.42
ATOM    5566  CA  LEU   813      -1.369    2.081  -10.072  1.00 27.98
ATOM    5567  CB  LEU   813      -1.231    1.814  -11.572  1.00 29.46
ATOM    5568  CG  LEU   813      -2.228    0.842  -12.220  1.00 33.93
ATOM    5569  CD1 LEU   813      -1.759    0.552  -13.636  1.00 36.02
ATOM    5570  CD2 LEU   813      -2.306   -0.460  -11.426  1.00 34.60
ATOM    5571  C   LEU   813      -0.075    1.704   -9.375  1.00 27.36
ATOM    5572  O   LEU   813       0.783    2.558   -9.138  1.00 24.70
```

```
ATOM   5573  N    VAL  814      0.046   0.422  -9.038  1.00 27.73
ATOM   5574  CA   VAL  814      1.238  -0.099  -8.388  1.00 24.77
ATOM   5575  CB   VAL  814      0.992  -1.504  -7.775  1.00 26.98
ATOM   5576  CG1  VAL  814      2.285  -2.045  -7.170  1.00 27.58
ATOM   5577  CG2  VAL  814     -0.088  -1.420  -6.705  1.00 29.29
ATOM   5578  C    VAL  814      2.313  -0.208  -9.456  1.00 21.90
ATOM   5579  O    VAL  814      2.128  -0.851 -10.487  1.00 19.33
ATOM   5580  N    MET  815      3.441   0.438  -9.202  1.00 20.34
ATOM   5581  CA   MET  815      4.546   0.432 -10.142  1.00 18.61
ATOM   5582  CB   MET  815      5.710   1.244  -9.564  1.00 15.22
ATOM   5583  CG   MET  815      6.183   0.786  -8.190  1.00 15.35
ATOM   5584  SD   MET  815      7.964   0.942  -8.143  1.00 16.36
ATOM   5585  CE   MET  815      8.452  -0.581  -8.957  1.00 11.50
ATOM   5586  C    MET  815      5.020  -0.973 -10.521  1.00 17.74
ATOM   5587  O    MET  815      5.483  -1.205 -11.639  1.00 19.67
ATOM   5588  N    HIS  816      4.908  -1.918  -9.597  1.00 17.17
ATOM   5589  CA   HIS  816      5.358  -3.276  -9.870  1.00 17.66
ATOM   5590  CB   HIS  816      5.319  -4.091  -8.570  1.00 16.96
ATOM   5591  CG   HIS  816      6.334  -3.639  -7.567  1.00 16.58
ATOM   5592  CD2  HIS  816      6.312  -2.620  -6.675  1.00 14.97
ATOM   5593  ND1  HIS  816      7.604  -4.173  -7.503  1.00 18.92
ATOM   5594  CE1  HIS  816      8.322  -3.500  -6.622  1.00 15.55
ATOM   5595  NE2  HIS  816      7.561  -2.551  -6.106  1.00 21.47
ATOM   5596  C    HIS  816      4.578  -3.953 -10.994  1.00 20.90
ATOM   5597  O    HIS  816      5.096  -4.844 -11.663  1.00 20.05
ATOM   5598  N    ASP  817      3.340  -3.524 -11.217  1.00 23.00
ATOM   5599  CA   ASP  817      2.526  -4.095 -12.294  1.00 25.53
ATOM   5600  CB   ASP  817      1.041  -4.013 -11.939  1.00 29.00
ATOM   5601  CG   ASP  817      0.689  -4.830 -10.710  1.00 32.54
ATOM   5602  OD1  ASP  817      0.878  -6.062 -10.742  1.00 34.60
ATOM   5603  OD2  ASP  817      0.224  -4.234  -9.716  1.00 34.24
ATOM   5604  C    ASP  817      2.786  -3.341 -13.602  1.00 26.31
ATOM   5605  O    ASP  817      2.743  -3.925 -14.687  1.00 27.79
ATOM   5606  N    ALA  818      3.064  -2.045 -13.489  1.00 27.64
ATOM   5607  CA   ALA  818      3.330  -1.195 -14.651  1.00 27.51
ATOM   5608  CB   ALA  818      3.461   0.262 -14.204  1.00 28.70
ATOM   5609  C    ALA  818      4.573  -1.609 -15.438  1.00 28.22
ATOM   5610  O    ALA  818      4.661  -1.348 -16.640  1.00 27.43
ATOM   5611  N    PHE  819      5.536  -2.242 -14.765  1.00 26.40
ATOM   5612  CA   PHE  819      6.764  -2.676 -15.434  1.00 25.70
ATOM   5613  CB   PHE  819      7.994  -2.133 -14.705  1.00 26.29
ATOM   5614  CG   PHE  819      7.889  -0.677 -14.359  1.00 27.48
ATOM   5615  CD1  PHE  819      7.412   0.237 -15.292  1.00 28.59
ATOM   5616  CD2  PHE  819      8.248  -0.219 -13.094  1.00 28.81
ATOM   5617  CE1  PHE  819      7.289   1.588 -14.975  1.00 29.43
ATOM   5618  CE2  PHE  819      8.131   1.132 -12.763  1.00 29.98
ATOM   5619  CZ   PHE  819      7.648   2.037 -13.707  1.00 30.70
ATOM   5620  C    PHE  819      6.869  -4.191 -15.551  1.00 25.12
ATOM   5621  O    PHE  819      7.935  -4.733 -15.846  1.00 24.68
ATOM   5622  N    GLY  820      5.753  -4.872 -15.323  1.00 24.44
ATOM   5623  CA   GLY  820      5.738  -6.320 -15.419  1.00 24.57
ATOM   5624  C    GLY  820      6.655  -7.010 -14.429  1.00 25.69
ATOM   5625  O    GLY  820      7.124  -8.120 -14.688  1.00 25.84
ATOM   5626  N    ILE  821      6.919  -6.360 -13.297  1.00 23.27
ATOM   5627  CA   ILE  821      7.779  -6.952 -12.277  1.00 22.14
ATOM   5628  CB   ILE  821      8.241  -5.891 -11.247  1.00 20.40
ATOM   5629  CG2  ILE  821      9.023  -6.565 -10.110  1.00 18.38
ATOM   5630  CG1  ILE  821      9.099  -4.839 -11.956  1.00 19.76
ATOM   5631  CD1  ILE  821      9.420  -3.621 -11.125  1.00 17.39
ATOM   5632  C    ILE  821      7.015  -8.065 -11.565  1.00 22.87
ATOM   5633  O    ILE  821      7.542  -9.153 -11.342  1.00 21.66
ATOM   5634  N    THR  822      5.757  -7.788 -11.238  1.00 24.23
ATOM   5635  CA   THR  822      4.916  -8.761 -10.562  1.00 28.76
ATOM   5636  CB   THR  822      3.548  -8.147 -10.196  1.00 29.81
ATOM   5637  OG1  THR  822      3.020  -7.441 -11.327  1.00 35.04
ATOM   5638  CG2  THR  822      3.697  -7.184  -9.036  1.00 29.52
ATOM   5639  C    THR  822      4.689 -10.014 -11.407  1.00 31.12
ATOM   5640  O    THR  822      4.675  -9.948 -12.638  1.00 28.97
ATOM   5641  N    GLY  823      4.514 -11.142 -10.718  1.00 33.39
ATOM   5642  CA   GLY  823      4.285 -12.431 -11.354  1.00 39.65
ATOM   5643  C    GLY  823      4.137 -12.444 -12.863  1.00 43.12
ATOM   5644  O    GLY  823      5.124 -12.358 -13.591  1.00 45.19
ATOM   5645  N    GLY  824      2.903 -12.560 -13.338  1.00 45.52
ATOM   5646  CA   GLY  824      2.671 -12.584 -14.769  1.00 47.84
ATOM   5647  C    GLY  824      1.199 -12.505 -15.103  1.00 49.56
ATOM   5648  O    GLY  824      0.818 -12.463 -16.271  1.00 50.56
ATOM   5649  N    HIS  825      0.368 -12.481 -14.068  1.00 50.83
```

```
ATOM   5650  CA   HIS  825    -1.077 -12.408 -14.248  1.00 52.44
ATOM   5651  CB   HIS  825    -1.737 -13.633 -13.610  1.00 54.90
ATOM   5652  CG   HIS  825    -1.153 -14.935 -14.063  1.00 57.95
ATOM   5653  CD2  HIS  825    -0.491 -15.900 -13.381  1.00 58.90
ATOM   5654  ND1  HIS  825    -1.195 -15.355 -15.376  1.00 59.02
ATOM   5655  CE1  HIS  825    -0.582 -16.522 -15.483  1.00 59.10
ATOM   5656  NE2  HIS  825    -0.146 -16.874 -14.287  1.00 58.90
ATOM   5657  C    HIS  825    -1.625 -11.131 -13.613  1.00 51.18
ATOM   5658  O    HIS  825    -2.490 -11.188 -12.738  1.00 51.71
ATOM   5659  N    ILE  826    -1.120  -9.982 -14.055  1.00 50.05
ATOM   5660  CA   ILE  826    -1.566  -8.698 -13.516  1.00 48.19
ATOM   5661  CB   ILE  826    -0.883  -7.510 -14.230  1.00 48.89
ATOM   5662  CG2  ILE  826     0.631  -7.612 -14.078  1.00 50.27
ATOM   5663  CG1  ILE  826    -1.280  -7.484 -15.707  1.00 49.07
ATOM   5664  CD1  ILE  826    -0.762  -6.273 -16.460  1.00 47.09
ATOM   5665  C    ILE  826    -3.077  -8.531 -13.640  1.00 46.15
ATOM   5666  O    ILE  826    -3.707  -9.119 -14.520  1.00 45.71
ATOM   5667  N    PRO  827    -3.678  -7.719 -12.758  1.00 44.37
ATOM   5668  CD   PRO  827    -3.037  -6.920 -11.700  1.00 43.85
ATOM   5669  CA   PRO  827    -5.124  -7.485 -12.780  1.00 43.13
ATOM   5670  CB   PRO  827    -5.344  -6.592 -11.560  1.00 44.15
ATOM   5671  CG   PRO  827    -4.058  -5.841 -11.457  1.00 45.19
ATOM   5672  C    PRO  827    -5.625  -6.849 -14.073  1.00 40.91
ATOM   5673  O    PRO  827    -4.887  -6.137 -14.753  1.00 40.25
ATOM   5674  N    LYS  828    -6.884  -7.116 -14.402  1.00 39.31
ATOM   5675  CA   LYS  828    -7.500  -6.580 -15.610  1.00 37.09
ATOM   5676  CB   LYS  828    -8.976  -6.986 -15.682  1.00 40.38
ATOM   5677  CG   LYS  828    -9.236  -8.338 -16.326  1.00 45.06
ATOM   5678  CD   LYS  828    -8.689  -9.480 -15.488  1.00 46.97
ATOM   5679  CE   LYS  828    -9.021 -10.818 -16.122  1.00 47.07
ATOM   5680  NZ   LYS  828    -8.544 -11.962 -15.299  1.00 48.51
ATOM   5681  C    LYS  828    -7.405  -5.069 -15.737  1.00 32.78
ATOM   5682  O    LYS  828    -7.356  -4.552 -16.847  1.00 32.06
ATOM   5683  N    PHE  829    -7.385  -4.364 -14.608  1.00 29.83
ATOM   5684  CA   PHE  829    -7.326  -2.903 -14.625  1.00 26.91
ATOM   5685  CB   PHE  829    -7.961  -2.332 -13.350  1.00 25.84
ATOM   5686  CG   PHE  829    -7.302  -2.794 -12.077  1.00 26.76
ATOM   5687  CD1  PHE  829    -6.061  -2.289 -11.684  1.00 25.54
ATOM   5688  CD2  PHE  829    -7.914  -3.752 -11.278  1.00 25.39
ATOM   5689  CE1  PHE  829    -5.447  -2.739 -10.514  1.00 27.51
ATOM   5690  CE2  PHE  829    -7.307  -4.203 -10.112  1.00 27.40
ATOM   5691  CZ   PHE  829    -6.071  -3.697  -9.728  1.00 26.75
ATOM   5692  C    PHE  829    -5.923  -2.332 -14.789  1.00 26.04
ATOM   5693  O    PHE  829    -5.766  -1.136 -15.010  1.00 26.02
ATOM   5694  N    ALA  830    -4.910  -3.184 -14.681  1.00 24.63
ATOM   5695  CA   ALA  830    -3.529  -2.736 -14.813  1.00 23.28
ATOM   5696  CB   ALA  830    -2.643  -3.490 -13.828  1.00 21.79
ATOM   5697  C    ALA  830    -2.997  -2.914 -16.229  1.00 22.75
ATOM   5698  O    ALA  830    -3.612  -3.579 -17.062  1.00 21.73
ATOM   5699  N    LYS  831    -1.842  -2.316 -16.495  1.00 21.73
ATOM   5700  CA   LYS  831    -1.209  -2.421 -17.801  1.00 20.75
ATOM   5701  CB   LYS  831    -1.694  -1.305 -18.731  1.00 22.17
ATOM   5702  CG   LYS  831    -0.965  -1.255 -20.074  1.00 22.12
ATOM   5703  CD   LYS  831    -1.486  -0.125 -20.950  1.00 24.84
ATOM   5704  CE   LYS  831    -0.669   0.000 -22.227  1.00 27.33
ATOM   5705  NZ   LYS  831    -1.132   1.104 -23.117  1.00 27.97
ATOM   5706  C    LYS  831     0.304  -2.345 -17.665  1.00 20.84
ATOM   5707  O    LYS  831     0.839  -1.515 -16.924  1.00 20.39
ATOM   5708  N    ASN  832     0.985  -3.226 -18.387  1.00 20.11
ATOM   5709  CA   ASN  832     2.442  -3.275 -18.393  1.00 20.06
ATOM   5710  CB   ASN  832     2.915  -4.696 -18.715  1.00 19.73
ATOM   5711  CG   ASN  832     4.430  -4.820 -18.755  1.00 19.21
ATOM   5712  OD1  ASN  832     5.145  -3.832 -18.897  1.00 21.54
ATOM   5713  ND2  ASN  832     4.921  -6.045 -18.653  1.00 18.62
ATOM   5714  C    ASN  832     2.933  -2.323 -19.480  1.00 20.14
ATOM   5715  O    ASN  832     2.993  -2.693 -20.653  1.00 19.00
ATOM   5716  N    PHE  833     3.283  -1.102 -19.087  1.00 20.67
ATOM   5717  CA   PHE  833     3.764  -0.102 -20.034  1.00 20.91
ATOM   5718  CB   PHE  833     3.696   1.301 -19.418  1.00 21.37
ATOM   5719  CG   PHE  833     2.298   1.809 -19.229  1.00 21.99
ATOM   5720  CD1  PHE  833     1.581   1.505 -18.075  1.00 21.53
ATOM   5721  CD2  PHE  833     1.679   2.557 -20.228  1.00 20.96
ATOM   5722  CE1  PHE  833     0.268   1.942 -17.919  1.00 23.22
ATOM   5723  CE2  PHE  833     0.367   2.997 -20.081  1.00 22.83
ATOM   5724  CZ   PHE  833    -0.345   2.689 -18.926  1.00 21.37
ATOM   5725  C    PHE  833     5.180  -0.373 -20.526  1.00 21.48
ATOM   5726  O    PHE  833     5.595   0.162 -21.556  1.00 22.31
```

```
ATOM   5727  N    LEU  834      5.919  -1.201 -19.793  1.00 19.73
ATOM   5728  CA   LEU  834      7.289  -1.541 -20.176  1.00 20.43
ATOM   5729  CB   LEU  834      8.037  -2.176 -18.999  1.00 19.89
ATOM   5730  CG   LEU  834      9.493  -2.566 -19.278  1.00 18.42
ATOM   5731  CD1  LEU  834     10.312  -1.300 -19.481  1.00 21.54
ATOM   5732  CD2  LEU  834     10.064  -3.383 -18.115  1.00 20.29
ATOM   5733  C    LEU  834      7.301  -2.513 -21.348  1.00 22.45
ATOM   5734  O    LEU  834      8.221  -2.506 -22.163  1.00 22.86
ATOM   5735  N    ALA  835      6.284  -3.364 -21.419  1.00 25.29
ATOM   5736  CA   ALA  835      6.190  -4.332 -22.504  1.00 29.51
ATOM   5737  CB   ALA  835      4.968  -5.221 -22.310  1.00 30.38
ATOM   5738  C    ALA  835      6.086  -3.582 -23.824  1.00 32.18
ATOM   5739  O    ALA  835      6.775  -3.911 -24.789  1.00 32.05
ATOM   5740  N    GLU  836      5.207  -2.581 -23.843  1.00 34.79
ATOM   5741  CA   GLU  836      4.973  -1.740 -25.013  1.00 38.46
ATOM   5742  CB   GLU  836      4.016  -0.595 -24.664  1.00 41.47
ATOM   5743  CG   GLU  836      2.611  -1.015 -24.239  1.00 45.34
ATOM   5744  CD   GLU  836      1.726  -1.390 -25.417  1.00 47.52
ATOM   5745  OE1  GLU  836      2.091  -2.328 -26.160  1.00 48.57
ATOM   5746  OE2  GLU  836      0.670  -0.743 -25.598  1.00 48.67
ATOM   5747  C    GLU  836      6.304  -1.151 -25.450  1.00 38.72
ATOM   5748  O    GLU  836      6.690  -1.249 -26.612  1.00 41.32
ATOM   5749  N    THR  837      6.997  -0.524 -24.506  1.00 37.17
ATOM   5750  CA   THR  837      8.284   0.072 -24.796  1.00 36.61
ATOM   5751  CB   THR  837      8.505   1.361 -23.987  1.00 36.83
ATOM   5752  OG1  THR  837      9.822   1.867 -24.253  1.00 38.80
ATOM   5753  CG2  THR  837      8.351   1.096 -22.489  1.00 35.24
ATOM   5754  C    THR  837      9.393  -0.920 -24.480  1.00 36.87
ATOM   5755  O    THR  837      9.207  -2.133 -24.616  1.00 38.89
ATOM   5756  N    GLY  838     10.546  -0.407 -24.067  1.00 33.88
ATOM   5757  CA   GLY  838     11.662  -1.272 -23.738  1.00 31.57
ATOM   5758  C    GLY  838     12.514  -0.674 -22.640  1.00 28.89
ATOM   5759  O    GLY  838     13.484  -1.277 -22.201  1.00 28.70
ATOM   5760  N    ASP  839     12.126   0.511 -22.186  1.00 28.03
ATOM   5761  CA   ASP  839     12.852   1.236 -21.154  1.00 27.44
ATOM   5762  CB   ASP  839     13.574   2.410 -21.834  1.00 32.86
ATOM   5763  CG   ASP  839     14.173   3.381 -20.859  1.00 35.56
ATOM   5764  OD1  ASP  839     13.475   4.350 -20.483  1.00 36.98
ATOM   5765  OD2  ASP  839     15.347   3.181 -20.470  1.00 40.04
ATOM   5766  C    ASP  839     11.886   1.714 -20.054  1.00 24.78
ATOM   5767  O    ASP  839     10.805   2.223 -20.349  1.00 24.31
ATOM   5768  N    ILE  840     12.274   1.550 -18.789  1.00 22.68
ATOM   5769  CA   ILE  840     11.418   1.952 -17.671  1.00 19.45
ATOM   5770  CB   ILE  840     12.087   1.625 -16.306  1.00 17.83
ATOM   5771  CG2  ILE  840     11.244   2.182 -15.154  1.00 17.98
ATOM   5772  CG1  ILE  840     12.249   0.111 -16.168  1.00 18.15
ATOM   5773  CD1  ILE  840     12.960  -0.332 -14.889  1.00 21.02
ATOM   5774  C    ILE  840     11.034   3.432 -17.708  1.00 18.92
ATOM   5775  O    ILE  840      9.879   3.783 -17.473  1.00 18.54
ATOM   5776  N    ARG  841     11.998   4.300 -17.995  1.00 19.90
ATOM   5777  CA   ARG  841     11.698   5.722 -18.067  1.00 19.12
ATOM   5778  CB   ARG  841     12.991   6.530 -18.204  1.00 18.56
ATOM   5779  CG   ARG  841     13.814   6.523 -16.916  1.00 20.62
ATOM   5780  CD   ARG  841     15.181   7.187 -17.067  1.00 21.49
ATOM   5781  NE   ARG  841     15.852   7.308 -15.774  1.00 21.81
ATOM   5782  CZ   ARG  841     16.347   6.286 -15.082  1.00 22.30
ATOM   5783  NH1  ARG  841     16.260   5.050 -15.556  1.00 21.26
ATOM   5784  NH2  ARG  841     16.914   6.501 -13.902  1.00 22.06
ATOM   5785  C    ARG  841     10.743   5.987 -19.232  1.00 18.94
ATOM   5786  O    ARG  841      9.842   6.822 -19.132  1.00 17.46
ATOM   5787  N    ALA  842     10.918   5.262 -20.331  1.00 19.89
ATOM   5788  CA   ALA  842     10.028   5.436 -21.469  1.00 20.59
ATOM   5789  CB   ALA  842     10.558   4.679 -22.677  1.00 22.80
ATOM   5790  C    ALA  842      8.638   4.921 -21.091  1.00 20.77
ATOM   5791  O    ALA  842      7.624   5.422 -21.583  1.00 22.42
ATOM   5792  N    ALA  843      8.591   3.922 -20.214  1.00 19.81
ATOM   5793  CA   ALA  843      7.320   3.346 -19.780  1.00 17.80
ATOM   5794  CB   ALA  843      7.566   2.046 -19.019  1.00 19.09
ATOM   5795  C    ALA  843      6.539   4.321 -18.910  1.00 17.75
ATOM   5796  O    ALA  843      5.310   4.411 -19.002  1.00 15.71
ATOM   5797  N    VAL  844      7.259   5.045 -18.059  1.00 17.72
ATOM   5798  CA   VAL  844      6.647   6.028 -17.183  1.00 17.43
ATOM   5799  CB   VAL  844      7.683   6.616 -16.185  1.00 15.55
ATOM   5800  CG1  VAL  844      7.074   7.786 -15.448  1.00 18.17
ATOM   5801  CG2  VAL  844      8.113   5.545 -15.169  1.00 15.06
ATOM   5802  C    VAL  844      6.063   7.159 -18.029  1.00 19.69
ATOM   5803  O    VAL  844      4.942   7.606 -17.790  1.00 19.85
```

```
ATOM    5804  N    ARG   845      6.817    7.618  -19.024  1.00 20.79
ATOM    5805  CA   ARG   845      6.325    8.695  -19.876  1.00 21.40
ATOM    5806  CB   ARG   845      7.394    9.118  -20.886  1.00 23.26
ATOM    5807  CG   ARG   845      8.621    9.752  -20.255  1.00 24.31
ATOM    5808  CD   ARG   845      9.502   10.422  -21.298  1.00 25.50
ATOM    5809  NE   ARG   845     10.126    9.470  -22.217  1.00 25.46
ATOM    5810  CZ   ARG   845     11.294    8.872  -22.001  1.00 26.44
ATOM    5811  NH1  ARG   845     11.976    9.121  -20.890  1.00 27.41
ATOM    5812  NH2  ARG   845     11.787    8.038  -22.908  1.00 24.69
ATOM    5813  C    ARG   845      5.054    8.281  -20.612  1.00 21.24
ATOM    5814  O    ARG   845      4.109    9.068  -20.733  1.00 19.90
ATOM    5815  N    GLN   846      5.029    7.044  -21.100  1.00 20.09
ATOM    5816  CA   GLN   846      3.862    6.549  -21.816  1.00 20.80
ATOM    5817  CB   GLN   846      4.140    5.163  -22.410  1.00 23.28
ATOM    5818  CG   GLN   846      2.932    4.529  -23.092  1.00 30.74
ATOM    5819  CD   GLN   846      3.280    3.266  -23.869  1.00 35.73
ATOM    5820  OE1  GLN   846      3.947    3.324  -24.904  1.00 38.70
ATOM    5821  NE2  GLN   846      2.833    2.117  -23.370  1.00 37.15
ATOM    5822  C    GLN   846      2.652    6.498  -20.889  1.00 19.10
ATOM    5823  O    GLN   846      1.527    6.809  -21.290  1.00 18.61
ATOM    5824  N    TYR   847      2.881    6.117  -19.639  1.00 18.58
ATOM    5825  CA   TYR   847      1.790    6.051  -18.676  1.00 18.17
ATOM    5826  CB   TYR   847      2.301    5.446  -17.365  1.00 17.16
ATOM    5827  CG   TYR   847      1.364    5.597  -16.189  1.00 14.88
ATOM    5828  CD1  TYR   847      0.037    5.160  -16.257  1.00 13.94
ATOM    5829  CE1  TYR   847     -0.810    5.277  -15.156  1.00 14.43
ATOM    5830  CD2  TYR   847      1.814    6.152  -14.995  1.00 14.30
ATOM    5831  CE2  TYR   847      0.980    6.272  -13.897  1.00 13.19
ATOM    5832  CZ   TYR   847     -0.321    5.839  -13.975  1.00 14.15
ATOM    5833  OH   TYR   847     -1.130    5.965  -12.876  1.00 15.40
ATOM    5834  C    TYR   847      1.222    7.453  -18.451  1.00 17.79
ATOM    5835  O    TYR   847      0.005    7.646  -18.429  1.00 18.16
ATOM    5836  N    MET   848      2.112    8.430  -18.299  1.00 19.31
ATOM    5837  CA   MET   848      1.705    9.813  -18.089  1.00 19.23
ATOM    5838  CB   MET   848      2.946   10.700  -17.931  1.00 21.20
ATOM    5839  CG   MET   848      3.724   10.462  -16.639  1.00 21.47
ATOM    5840  SD   MET   848      5.424   11.088  -16.716  1.00 22.85
ATOM    5841  CE   MET   848      5.109   12.850  -16.646  1.00 23.08
ATOM    5842  C    MET   848      0.861   10.304  -19.263  1.00 19.69
ATOM    5843  O    MET   848     -0.208   10.882  -19.075  1.00 19.25
ATOM    5844  N    ALA   849      1.339   10.051  -20.476  1.00 20.45
ATOM    5845  CA   ALA   849      0.643   10.487  -21.681  1.00 20.76
ATOM    5846  CB   ALA   849      1.537   10.280  -22.894  1.00 20.70
ATOM    5847  C    ALA   849     -0.701    9.797  -21.892  1.00 21.08
ATOM    5848  O    ALA   849     -1.699   10.456  -22.169  1.00 22.23
ATOM    5849  N    GLU   850     -0.740    8.475  -21.761  1.00 19.51
ATOM    5850  CA   GLU   850     -1.996    7.759  -21.960  1.00 20.22
ATOM    5851  CB   GLU   850     -1.751    6.250  -21.977  1.00 20.03
ATOM    5852  CG   GLU   850     -1.091    5.780  -23.261  1.00 21.40
ATOM    5853  CD   GLU   850     -0.997    4.282  -23.355  1.00 22.09
ATOM    5854  OE1  GLU   850     -1.802    3.593  -22.703  1.00 23.56
ATOM    5855  OE2  GLU   850     -0.124    3.792  -24.096  1.00 27.29
ATOM    5856  C    GLU   850     -3.075    8.108  -20.942  1.00 20.17
ATOM    5857  O    GLU   850     -4.268    7.947  -21.211  1.00 20.44
ATOM    5858  N    VAL   851     -2.666    8.574  -19.765  1.00 20.20
ATOM    5859  CA   VAL   851     -3.642    8.967  -18.752  1.00 18.55
ATOM    5860  CB   VAL   851     -2.995    9.092  -17.352  1.00 19.02
ATOM    5861  CG1  VAL   851     -3.957    9.783  -16.387  1.00 13.86
ATOM    5862  CG2  VAL   851     -2.663    7.700  -16.820  1.00 17.16
ATOM    5863  C    VAL   851     -4.266   10.305  -19.154  1.00 18.95
ATOM    5864  O    VAL   851     -5.489   10.453  -19.167  1.00 17.91
ATOM    5865  N    GLU   852     -3.424   11.270  -19.506  1.00 20.35
ATOM    5866  CA   GLU   852     -3.918   12.583  -19.895  1.00 22.19
ATOM    5867  CB   GLU   852     -2.748   13.567  -20.023  1.00 24.34
ATOM    5868  CG   GLU   852     -3.173   14.986  -20.385  1.00 28.53
ATOM    5869  CD   GLU   852     -2.073   16.009  -20.170  1.00 30.90
ATOM    5870  OE1  GLU   852     -2.210   17.137  -20.687  1.00 35.44
ATOM    5871  OE2  GLU   852     -1.079   15.696  -19.480  1.00 31.33
ATOM    5872  C    GLU   852     -4.745   12.560  -21.186  1.00 22.60
ATOM    5873  O    GLU   852     -5.634   13.393  -21.376  1.00 21.58
ATOM    5874  N    SER   853     -4.465   11.602  -22.064  1.00 23.29
ATOM    5875  CA   SER   853     -5.204   11.489  -23.322  1.00 24.06
ATOM    5876  CB   SER   853     -4.340   10.844  -24.405  1.00 26.77
ATOM    5877  OG   SER   853     -3.358   11.747  -24.879  1.00 34.21
ATOM    5878  C    SER   853     -6.473   10.671  -23.162  1.00 23.46
ATOM    5879  O    SER   853     -7.340   10.690  -24.033  1.00 21.96
ATOM    5880  N    GLY   854     -6.576    9.948  -22.052  1.00 20.67
```

```
ATOM    5881   CA   GLY   854      -7.752    9.131 -21.822   1.00 21.47
ATOM    5882   C    GLY   854      -7.620    7.744 -22.424   1.00 21.43
ATOM    5883   O    GLY   854      -8.552    6.947 -22.343   1.00 22.20
ATOM    5884   N    VAL   855      -6.472    7.459 -23.032   1.00 21.89
ATOM    5885   CA   VAL   855      -6.210    6.151 -23.636   1.00 22.78
ATOM    5886   CB   VAL   855      -4.871    6.155 -24.394   1.00 23.64
ATOM    5887   CG1  VAL   855      -4.521    4.744 -24.855   1.00 25.02
ATOM    5888   CG2  VAL   855      -4.967    7.087 -25.588   1.00 27.01
ATOM    5889   C    VAL   855      -6.160    5.071 -22.562   1.00 22.02
ATOM    5890   O    VAL   855      -6.572    3.928 -22.787   1.00 21.37
ATOM    5891   N    TYR   856      -5.632    5.448 -21.400   1.00 20.96
ATOM    5892   CA   TYR   856      -5.530    4.551 -20.252   1.00 19.68
ATOM    5893   CB   TYR   856      -4.073    4.276 -19.887   1.00 17.64
ATOM    5894   CG   TYR   856      -3.966    3.319 -18.729   1.00 18.23
ATOM    5895   CD1  TYR   856      -4.153    1.951 -18.923   1.00 17.91
ATOM    5896   CE1  TYR   856      -4.151    1.068 -17.849   1.00 17.59
ATOM    5897   CD2  TYR   856      -3.766    3.782 -17.424   1.00 19.26
ATOM    5898   CE2  TYR   856      -3.763    2.905 -16.339   1.00 16.18
ATOM    5899   CZ   TYR   856      -3.958    1.553 -16.560   1.00 18.50
ATOM    5900   OH   TYR   856      -3.975    0.676 -15.494   1.00 19.57
ATOM    5901   C    TYR   856      -6.208    5.195 -19.048   1.00 19.48
ATOM    5902   O    TYR   856      -5.951    6.360 -18.735   1.00 18.59
ATOM    5903   N    PRO   857      -7.057    4.435 -18.339   1.00 21.09
ATOM    5904   CD   PRO   857      -7.690    4.858 -17.079   1.00 22.39
ATOM    5905   CA   PRO   857      -7.373    3.034 -18.631   1.00 22.76
ATOM    5906   CB   PRO   857      -7.935    2.528 -17.309   1.00 23.94
ATOM    5907   CG   PRO   857      -8.658    3.724 -16.794   1.00 24.29
ATOM    5908   C    PRO   857      -8.355    2.860 -19.784   1.00 23.68
ATOM    5909   O    PRO   857      -9.263    3.670 -19.970   1.00 22.22
ATOM    5910   N    GLY   858      -8.166    1.797 -20.558   1.00 24.27
ATOM    5911   CA   GLY   858      -9.048    1.541 -21.684   1.00 24.39
ATOM    5912   C    GLY   858     -10.250    0.719 -21.272   1.00 25.24
ATOM    5913   O    GLY   858     -10.357    0.297 -20.122   1.00 23.87
ATOM    5914   N    GLU   859     -11.165    0.491 -22.205   1.00 25.45
ATOM    5915   CA   GLU   859     -12.344   -0.302 -21.891   1.00 28.69
ATOM    5916   CB   GLU   859     -13.185   -0.520 -23.151   1.00 31.54
ATOM    5917   CG   GLU   859     -14.435   -1.339 -22.908   1.00 34.32
ATOM    5918   CD   GLU   859     -15.420   -0.640 -21.992   1.00 37.49
ATOM    5919   OE1  GLU   859     -16.335   -1.318 -21.482   1.00 40.17
ATOM    5920   OE2  GLU   859     -15.284    0.587 -21.787   1.00 37.73
ATOM    5921   C    GLU   859     -11.911   -1.650 -21.312   1.00 28.31
ATOM    5922   O    GLU   859     -12.585   -2.207 -20.446   1.00 28.91
ATOM    5923   N    GLU   860     -10.774   -2.161 -21.779   1.00 30.25
ATOM    5924   CA   GLU   860     -10.255   -3.448 -21.313   1.00 31.44
ATOM    5925   CB   GLU   860      -9.016   -3.851 -22.119   1.00 35.44
ATOM    5926   CG   GLU   860      -9.077   -3.503 -23.593   1.00 41.38
ATOM    5927   CD   GLU   860      -8.747   -2.044 -23.853   1.00 43.62
ATOM    5928   OE1  GLU   860      -7.599   -1.637 -23.565   1.00 44.99
ATOM    5929   OE2  GLU   860      -9.633   -1.306 -24.342   1.00 44.03
ATOM    5930   C    GLU   860      -9.887   -3.455 -19.833   1.00 31.02
ATOM    5931   O    GLU   860      -9.957   -4.494 -19.177   1.00 30.50
ATOM    5932   N    HIS   861      -9.488   -2.296 -19.316   1.00 28.81
ATOM    5933   CA   HIS   861      -9.087   -2.169 -17.915   1.00 27.99
ATOM    5934   CB   HIS   861      -7.934   -1.170 -17.793   1.00 25.91
ATOM    5935   CG   HIS   861      -6.871   -1.344 -18.828   1.00 24.41
ATOM    5936   CD2  HIS   861      -6.519   -0.568 -19.880   1.00 22.82
ATOM    5937   ND1  HIS   861      -6.026   -2.432 -18.855   1.00 25.29
ATOM    5938   CE1  HIS   861      -5.199   -2.319 -19.879   1.00 22.41
ATOM    5939   NE2  HIS   861      -5.478   -1.197 -20.518   1.00 24.27
ATOM    5940   C    HIS   861     -10.235   -1.677 -17.044   1.00 27.60
ATOM    5941   O    HIS   861     -10.042   -1.385 -15.866   1.00 27.53
ATOM    5942   N    SER   862     -11.427   -1.594 -17.622   1.00 26.94
ATOM    5943   CA   SER   862     -12.580   -1.096 -16.888   1.00 27.95
ATOM    5944   CB   SER   862     -13.240    0.028 -17.686   1.00 27.74
ATOM    5945   OG   SER   862     -12.273    0.974 -18.118   1.00 28.11
ATOM    5946   C    SER   862     -13.620   -2.160 -16.548   1.00 29.39
ATOM    5947   O    SER   862     -13.764   -3.156 -17.258   1.00 28.79
ATOM    5948   N    PHE   863     -14.336   -1.936 -15.447   1.00 29.95
ATOM    5949   CA   PHE   863     -15.385   -2.842 -14.998   1.00 32.29
ATOM    5950   CB   PHE   863     -15.257   -3.141 -13.498   1.00 30.67
ATOM    5951   CG   PHE   863     -13.991   -3.858 -13.120   1.00 31.07
ATOM    5952   CD1  PHE   863     -12.912   -3.160 -12.587   1.00 31.09
ATOM    5953   CD2  PHE   863     -13.875   -5.234 -13.298   1.00 31.78
ATOM    5954   CE1  PHE   863     -11.737   -3.820 -12.231   1.00 30.30
ATOM    5955   CE2  PHE   863     -12.703   -5.905 -12.947   1.00 32.24
ATOM    5956   CZ   PHE   863     -11.633   -5.195 -12.413   1.00 32.64
ATOM    5957   C    PHE   863     -16.741   -2.197 -15.261   1.00 34.00
```

```
ATOM   5958  O    PHE   863    -16.819  -1.031 -15.651   1.00 34.45
ATOM   5959  N    HIS   864    -17.807  -2.959 -15.042   1.00 35.05
ATOM   5960  CA   HIS   864    -19.163  -2.465 -15.252   1.00 36.87
ATOM   5961  CB   HIS   864    -19.600  -2.700 -16.700   1.00 37.63
ATOM   5962  CG   HIS   864    -18.935  -1.789 -17.682   1.00 37.41
ATOM   5963  CD2  HIS   864    -18.064  -2.042 -18.688   1.00 38.33
ATOM   5964  ND1  HIS   864    -19.130  -0.425 -17.678   1.00 38.08
ATOM   5965  CE1  HIS   864    -18.408   0.123 -18.639   1.00 37.64
ATOM   5966  NE2  HIS   864    -17.752  -0.835 -19.266   1.00 37.77
ATOM   5967  C    HIS   864    -20.132  -3.147 -14.305   1.00 37.62
ATOM   5968  O    HIS   864    -21.218  -2.579 -14.068   1.00 38.24
ATOM   5969  OXT  HIS   864    -19.794  -4.250 -13.826   1.00 39.23
ATOM   5970  C1   KPL   865     -3.357   0.634  -5.095   1.00 39.96
ATOM   5971  C2   KPL   865     -3.550   1.896  -4.226   1.00 38.72
ATOM   5972  C3   KPL   865     -2.617   2.997  -4.740   1.00 39.62
ATOM   5973  C4   KPL   865     -5.003   2.393  -4.350   1.00 40.42
ATOM   5974  O1   KPL   865     -5.910   1.387  -3.884   1.00 45.23
ATOM   5975  C5   KPL   865     -3.211   1.589  -2.749   1.00 35.98
ATOM   5976  O2   KPL   865     -4.048   1.753  -1.886   1.00 36.91
ATOM   5977  C6   KPL   865     -1.855   1.081  -2.331   1.00 32.68
ATOM   5978  O3   KPL   865     -0.975   0.900  -3.150   1.00 30.34
ATOM   5979  O4   KPL   865     -1.620   0.826  -1.028   1.00 27.08
ATOM   5980  CB   MET   901    -12.712 -23.902  -0.148   1.00 60.92
ATOM   5981  CG   MET   901    -12.590 -25.152  -1.024   1.00 62.73
ATOM   5982  SD   MET   901    -10.891 -25.631  -1.435   1.00 65.23
ATOM   5983  CE   MET   901    -10.776 -25.064  -3.145   1.00 64.55
ATOM   5984  C    MET   901    -10.847 -22.440  -0.981   1.00 58.43
ATOM   5985  O    MET   901    -10.083 -23.083  -0.258   1.00 58.56
ATOM   5986  N    MET   901    -13.083 -22.466  -2.137   1.00 59.24
ATOM   5987  CA   MET   901    -12.364 -22.573  -0.834   1.00 59.60
ATOM   5988  N    LYS   902    -10.415 -21.594  -1.912   1.00 56.21
ATOM   5989  CA   LYS   902     -8.991 -21.379  -2.147   1.00 52.69
ATOM   5990  CB   LYS   902     -8.505 -22.296  -3.281   1.00 54.41
ATOM   5991  CG   LYS   902     -6.987 -22.462  -3.364   1.00 55.97
ATOM   5992  CD   LYS   902     -6.322 -21.347  -4.158   1.00 57.24
ATOM   5993  CE   LYS   902     -6.660 -21.451  -5.641   1.00 58.67
ATOM   5994  NZ   LYS   902     -5.962 -20.416  -6.455   1.00 59.28
ATOM   5995  C    LYS   902     -8.721 -19.915  -2.491   1.00 49.10
ATOM   5996  O    LYS   902     -8.688 -19.538  -3.664   1.00 49.44
ATOM   5997  N    PRO   903     -8.542 -19.065  -1.465   1.00 44.68
ATOM   5998  CD   PRO   903     -8.096 -17.671  -1.635   1.00 43.26
ATOM   5999  CA   PRO   903     -8.590 -19.422  -0.042   1.00 40.59
ATOM   6000  CB   PRO   903     -7.827 -18.281   0.615   1.00 41.44
ATOM   6001  CG   PRO   903     -8.221 -17.114  -0.230   1.00 42.64
ATOM   6002  C    PRO   903    -10.016 -19.540   0.488   1.00 37.14
ATOM   6003  O    PRO   903    -10.957 -19.042  -0.125   1.00 35.87
ATOM   6004  N    THR   904    -10.175 -20.205   1.628   1.00 32.92
ATOM   6005  CA   THR   904    -11.494 -20.369   2.227   1.00 29.48
ATOM   6006  CB   THR   904    -11.504 -21.543   3.238   1.00 29.39
ATOM   6007  OG1  THR   904    -11.161 -22.764   2.565   1.00 26.97
ATOM   6008  CG2  THR   904    -12.873 -21.690   3.869   1.00 26.63
ATOM   6009  C    THR   904    -11.857 -19.073   2.950   1.00 28.40
ATOM   6010  O    THR   904    -11.066 -18.560   3.739   1.00 27.37
ATOM   6011  N    THR   905    -13.047 -18.543   2.675   1.00 28.09
ATOM   6012  CA   THR   905    -13.487 -17.300   3.308   1.00 28.38
ATOM   6013  CB   THR   905    -13.470 -16.122   2.310   1.00 29.55
ATOM   6014  OG1  THR   905    -14.342 -16.416   1.211   1.00 31.91
ATOM   6015  CG2  THR   905    -12.066 -15.873   1.796   1.00 31.52
ATOM   6016  C    THR   905    -14.894 -17.398   3.888   1.00 27.90
ATOM   6017  O    THR   905    -15.603 -18.380   3.670   1.00 26.37
ATOM   6018  N    ILE   906    -15.288 -16.370   4.633   1.00 28.35
ATOM   6019  CA   ILE   906    -16.611 -16.331   5.244   1.00 29.75
ATOM   6020  CB   ILE   906    -16.854 -14.979   5.961   1.00 30.43
ATOM   6021  CG2  ILE   906    -18.113 -15.061   6.819   1.00 29.82
ATOM   6022  CG1  ILE   906    -15.659 -14.641   6.856   1.00 32.57
ATOM   6023  CD1  ILE   906    -15.638 -13.192   7.341   1.00 34.53
ATOM   6024  C    ILE   906    -17.661 -16.505   4.151   1.00 30.16
ATOM   6025  O    ILE   906    -18.729 -17.073   4.384   1.00 29.90
ATOM   6026  N    SER   907    -17.340 -16.021   2.955   1.00 31.30
ATOM   6027  CA   SER   907    -18.244 -16.107   1.810   1.00 32.70
ATOM   6028  CB   SER   907    -17.545 -15.593   0.547   1.00 33.26
ATOM   6029  OG   SER   907    -16.935 -14.332   0.770   1.00 34.50
ATOM   6030  C    SER   907    -18.700 -17.544   1.581   1.00 32.03
ATOM   6031  O    SER   907    -19.860 -17.793   1.255   1.00 31.78
ATOM   6032  N    LEU   908    -17.777 -18.485   1.757   1.00 32.10
ATOM   6033  CA   LEU   908    -18.071 -19.900   1.563   1.00 31.83
ATOM   6034  CB   LEU   908    -16.783 -20.723   1.643   1.00 33.59
```

```
ATOM    6035  CG  LEU   908    -16.563 -21.785   0.566  1.00 35.17
ATOM    6036  CD1 LEU   908    -15.600 -22.822   1.103  1.00 34.73
ATOM    6037  CD2 LEU   908    -17.877 -22.441   0.173  1.00 36.87
ATOM    6038  C   LEU   908    -19.073 -20.437   2.586  1.00 30.86
ATOM    6039  O   LEU   908    -20.056 -21.087   2.223  1.00 31.03
ATOM    6040  N   LEU   909    -18.818 -20.176   3.865  1.00 29.63
ATOM    6041  CA  LEU   909    -19.705 -20.643   4.926  1.00 28.90
ATOM    6042  CB  LEU   909    -19.179 -20.219   6.297  1.00 26.59
ATOM    6043  CG  LEU   909    -17.783 -20.723   6.669  1.00 26.10
ATOM    6044  CD1 LEU   909    -17.476 -20.315   8.102  1.00 25.81
ATOM    6045  CD2 LEU   909    -17.721 -22.229   6.519  1.00 27.17
ATOM    6046  C   LEU   909    -21.109 -20.093   4.750  1.00 29.37
ATOM    6047  O   LEU   909    -22.092 -20.765   5.056  1.00 28.78
ATOM    6048  N   GLN   910    -21.198 -18.861   4.266  1.00 30.45
ATOM    6049  CA  GLN   910    -22.494 -18.234   4.050  1.00 33.43
ATOM    6050  CB  GLN   910    -22.306 -16.767   3.659  1.00 33.71
ATOM    6051  CG  GLN   910    -23.589 -15.949   3.626  1.00 37.45
ATOM    6052  CD  GLN   910    -24.345 -15.976   4.944  1.00 37.83
ATOM    6053  OE1 GLN   910    -25.058 -16.935   5.250  1.00 38.97
ATOM    6054  NE2 GLN   910    -24.182 -14.924   5.738  1.00 36.67
ATOM    6055  C   GLN   910    -23.205 -19.006   2.945  1.00 33.53
ATOM    6056  O   GLN   910    -24.405 -19.258   3.028  1.00 33.64
ATOM    6057  N   LYS   911    -22.451 -19.389   1.919  1.00 35.95
ATOM    6058  CA  LYS   911    -23.004 -20.154   0.811  1.00 36.69
ATOM    6059  CB  LYS   911    -21.947 -20.387  -0.269  1.00 38.54
ATOM    6060  CG  LYS   911    -22.480 -21.146  -1.478  1.00 41.44
ATOM    6061  CD  LYS   911    -21.484 -22.170  -2.010  1.00 42.22
ATOM    6062  CE  LYS   911    -20.210 -21.525  -2.522  1.00 43.30
ATOM    6063  NZ  LYS   911    -19.319 -22.540  -3.158  1.00 44.28
ATOM    6064  C   LYS   911    -23.488 -21.504   1.326  1.00 36.17
ATOM    6065  O   LYS   911    -24.545 -21.989   0.927  1.00 36.29
ATOM    6066  N   TYR   912    -22.702 -22.108   2.214  1.00 35.44
ATOM    6067  CA  TYR   912    -23.041 -23.407   2.789  1.00 33.78
ATOM    6068  CB  TYR   912    -21.945 -23.862   3.758  1.00 35.49
ATOM    6069  CG  TYR   912    -20.707 -24.422   3.091  1.00 37.41
ATOM    6070  CD1 TYR   912    -19.533 -24.628   3.820  1.00 38.67
ATOM    6071  CE1 TYR   912    -18.395 -25.159   3.217  1.00 39.92
ATOM    6072  CD2 TYR   912    -20.710 -24.766   1.737  1.00 38.60
ATOM    6073  CE2 TYR   912    -19.580 -25.299   1.127  1.00 40.16
ATOM    6074  CZ  TYR   912    -18.428 -25.493   1.871  1.00 40.30
ATOM    6075  OH  TYR   912    -17.310 -26.021   1.270  1.00 42.12
ATOM    6076  C   TYR   912    -24.375 -23.390   3.516  1.00 33.39
ATOM    6077  O   TYR   912    -25.128 -24.359   3.460  1.00 31.55
ATOM    6078  N   LYS   913    -24.663 -22.297   4.211  1.00 32.88
ATOM    6079  CA  LYS   913    -25.920 -22.202   4.936  1.00 35.58
ATOM    6080  CB  LYS   913    -25.914 -20.999   5.878  1.00 33.03
ATOM    6081  CG  LYS   913    -27.182 -20.898   6.697  1.00 32.07
ATOM    6082  CD  LYS   913    -27.072 -19.884   7.815  1.00 29.62
ATOM    6083  CE  LYS   913    -28.360 -19.861   8.616  1.00 28.34
ATOM    6084  NZ  LYS   913    -28.225 -19.120   9.891  1.00 28.41
ATOM    6085  C   LYS   913    -27.092 -22.086   3.968  1.00 37.48
ATOM    6086  O   LYS   913    -28.156 -22.656   4.203  1.00 37.96
ATOM    6087  N   GLN   914    -26.891 -21.346   2.883  1.00 40.52
ATOM    6088  CA  GLN   914    -27.931 -21.161   1.880  1.00 43.74
ATOM    6089  CB  GLN   914    -27.498 -20.122   0.845  1.00 45.66
ATOM    6090  CG  GLN   914    -27.215 -18.745   1.427  1.00 48.82
ATOM    6091  CD  GLN   914    -26.988 -17.695   0.355  1.00 51.41
ATOM    6092  OE1 GLN   914    -27.882 -17.405  -0.442  1.00 53.67
ATOM    6093  NE2 GLN   914    -25.788 -17.122   0.327  1.00 52.30
ATOM    6094  C   GLN   914    -28.227 -22.481   1.183  1.00 44.63
ATOM    6095  O   GLN   914    -29.357 -22.735   0.768  1.00 44.57
ATOM    6096  N   GLU   915    -27.198 -23.314   1.058  1.00 45.74
ATOM    6097  CA  GLU   915    -27.327 -24.617   0.418  1.00 46.23
ATOM    6098  CB  GLU   915    -26.026 -24.988  -0.298  1.00 47.95
ATOM    6099  CG  GLU   915    -25.516 -23.913  -1.243  1.00 51.08
ATOM    6100  CD  GLU   915    -24.213 -24.299  -1.917  1.00 52.26
ATOM    6101  OE1 GLU   915    -23.270 -24.711  -1.205  1.00 53.21
ATOM    6102  OE2 GLU   915    -24.127 -24.181  -3.157  1.00 53.18
ATOM    6103  C   GLU   915    -27.654 -25.675   1.463  1.00 45.27
ATOM    6104  O   GLU   915    -27.700 -26.867   1.160  1.00 45.43
ATOM    6105  N   LYS   916    -27.874 -25.233   2.697  1.00 44.09
ATOM    6106  CA  LYS   916    -28.206 -26.138   3.792  1.00 43.28
ATOM    6107  CB  LYS   916    -29.587 -26.754   3.558  1.00 45.07
ATOM    6108  CG  LYS   916    -30.712 -25.741   3.545  1.00 46.88
ATOM    6109  CD  LYS   916    -30.921 -25.137   4.921  1.00 48.53
ATOM    6110  CE  LYS   916    -31.908 -23.981   4.871  1.00 50.30
ATOM    6111  NZ  LYS   916    -33.206 -24.382   4.267  1.00 51.08
```

```
ATOM    6112  C    LYS   916    -27.177 -27.249   3.976   1.00 42.34
ATOM    6113  O    LYS   916    -27.519 -28.359   4.382   1.00 42.68
ATOM    6114  N    LYS   917    -25.918 -26.949   3.673   1.00 40.67
ATOM    6115  CA   LYS   917    -24.849 -27.928   3.823   1.00 38.46
ATOM    6116  CB   LYS   917    -23.865 -27.841   2.654   1.00 39.13
ATOM    6117  CG   LYS   917    -22.696 -28.814   2.781   1.00 41.58
ATOM    6118  CD   LYS   917    -21.540 -28.465   1.851   1.00 44.05
ATOM    6119  CE   LYS   917    -21.903 -28.642   0.387   1.00 46.51
ATOM    6120  NZ   LYS   917    -20.749 -28.300  -0.494   1.00 48.27
ATOM    6121  C    LYS   917    -24.095 -27.675   5.123   1.00 36.66
ATOM    6122  O    LYS   917    -23.297 -26.741   5.211   1.00 35.67
ATOM    6123  N    ARG   918    -24.355 -28.504   6.129   1.00 33.82
ATOM    6124  CA   ARG   918    -23.689 -28.373   7.420   1.00 31.81
ATOM    6125  CB   ARG   918    -24.297 -29.362   8.426   1.00 30.96
ATOM    6126  CG   ARG   918    -25.668 -28.926   8.931   1.00 32.18
ATOM    6127  CD   ARG   918    -26.346 -29.957   9.826   1.00 33.25
ATOM    6128  NE   ARG   918    -26.812 -31.128   9.084   1.00 33.83
ATOM    6129  CZ   ARG   918    -27.706 -32.000   9.544   1.00 33.54
ATOM    6130  NH1  ARG   918    -28.240 -31.840  10.747   1.00 33.73
ATOM    6131  NH2  ARG   918    -28.071 -33.036   8.801   1.00 35.50
ATOM    6132  C    ARG   918    -22.192 -28.624   7.242   1.00 29.61
ATOM    6133  O    ARG   918    -21.792 -29.565   6.557   1.00 29.96
ATOM    6134  N    PHE   919    -21.368 -27.778   7.857   1.00 26.58
ATOM    6135  CA   PHE   919    -19.911 -27.890   7.738   1.00 24.02
ATOM    6136  CB   PHE   919    -19.368 -26.625   7.062   1.00 24.17
ATOM    6137  CG   PHE   919    -19.743 -25.350   7.771   1.00 23.99
ATOM    6138  CD1  PHE   919    -18.925 -24.820   8.769   1.00 22.22
ATOM    6139  CD2  PHE   919    -20.932 -24.691   7.459   1.00 23.20
ATOM    6140  CE1  PHE   919    -19.286 -23.657   9.440   1.00 22.28
ATOM    6141  CE2  PHE   919    -21.299 -23.528   8.127   1.00 23.01
ATOM    6142  CZ   PHE   919    -20.475 -23.009   9.120   1.00 23.76
ATOM    6143  C    PHE   919    -19.206 -28.097   9.076   1.00 23.65
ATOM    6144  O    PHE   919    -19.679 -27.636  10.119   1.00 22.72
ATOM    6145  N    ALA   920    -18.071 -28.789   9.049   1.00 21.57
ATOM    6146  CA   ALA   920    -17.313 -29.028  10.276   1.00 19.22
ATOM    6147  CB   ALA   920    -16.709 -30.436  10.260   1.00 18.52
ATOM    6148  C    ALA   920    -16.213 -27.988  10.445   1.00 17.19
ATOM    6149  O    ALA   920    -15.645 -27.506   9.463   1.00 17.07
ATOM    6150  N    THR   921    -15.932 -27.644  11.701   1.00 17.33
ATOM    6151  CA   THR   921    -14.904 -26.662  12.071   1.00 17.47
ATOM    6152  CB   THR   921    -15.550 -25.358  12.581   1.00 20.30
ATOM    6153  OG1  THR   921    -16.349 -24.781  11.533   1.00 24.13
ATOM    6154  CG2  THR   921    -14.492 -24.372  12.999   1.00 27.64
ATOM    6155  C    THR   921    -14.091 -27.293  13.205   1.00 14.38
ATOM    6156  O    THR   921    -14.586 -28.182  13.892   1.00 13.90
ATOM    6157  N    ILE   922    -12.861 -26.843  13.424   1.00 13.81
ATOM    6158  CA   ILE   922    -12.054 -27.454  14.481   1.00 13.12
ATOM    6159  CB   ILE   922    -11.367 -28.728  13.943   1.00 15.52
ATOM    6160  CG2  ILE   922    -10.274 -28.341  12.925   1.00 15.80
ATOM    6161  CG1  ILE   922    -10.771 -29.531  15.102   1.00 15.54
ATOM    6162  CD1  ILE   922    -10.400 -30.953  14.734   1.00 25.56
ATOM    6163  C    ILE   922    -10.988 -26.514  15.040   1.00 13.33
ATOM    6164  O    ILE   922    -10.591 -25.555  14.375   1.00 13.71
ATOM    6165  N    THR   923    -10.533 -26.778  16.262   1.00 13.37
ATOM    6166  CA   THR   923     -9.475 -25.955  16.844   1.00 11.94
ATOM    6167  CB   THR   923     -9.471 -25.979  18.403   1.00 11.46
ATOM    6168  OG1  THR   923     -9.137 -27.294  18.866   1.00 14.02
ATOM    6169  CG2  THR   923    -10.842 -25.564  18.962   1.00 12.48
ATOM    6170  C    THR   923     -8.130 -26.494  16.358   1.00 11.04
ATOM    6171  O    THR   923     -8.010 -27.662  15.998   1.00 11.93
ATOM    6172  N    ALA   924     -7.133 -25.616  16.324   1.00 10.01
ATOM    6173  CA   ALA   924     -5.783 -25.965  15.908   1.00  9.37
ATOM    6174  CB   ALA   924     -5.634 -25.881  14.390   1.00 10.66
ATOM    6175  C    ALA   924     -4.876 -24.948  16.574   1.00  9.13
ATOM    6176  O    ALA   924     -5.262 -23.791  16.738   1.00  9.96
ATOM    6177  N    TYR   925     -3.674 -25.367  16.955   1.00  8.67
ATOM    6178  CA   TYR   925     -2.757 -24.463  17.638   1.00 10.02
ATOM    6179  CB   TYR   925     -2.809 -24.709  19.143   1.00  9.74
ATOM    6180  CG   TYR   925     -4.188 -25.007  19.687   1.00 10.81
ATOM    6181  CD1  TYR   925     -4.619 -26.328  19.842   1.00 11.73
ATOM    6182  CE1  TYR   925     -5.871 -26.625  20.373   1.00 12.92
ATOM    6183  CD2  TYR   925     -5.051 -23.982  20.069   1.00 11.21
ATOM    6184  CE2  TYR   925     -6.315 -24.269  20.603   1.00 10.91
ATOM    6185  CZ   TYR   925     -6.711 -25.592  20.752   1.00 12.01
ATOM    6186  OH   TYR   925     -7.945 -25.890  21.293   1.00 13.23
ATOM    6187  C    TYR   925     -1.326 -24.619  17.174   1.00  9.34
ATOM    6188  O    TYR   925     -0.420 -24.017  17.744   1.00 10.90
```

```
ATOM    6189  N   ASP   926     -1.106 -25.447  16.161  1.00  8.96
ATOM    6190  CA  ASP   926      0.250 -25.626  15.672  1.00 10.92
ATOM    6191  CB  ASP   926      0.971 -26.694  16.509  1.00 11.44
ATOM    6192  CG  ASP   926      0.378 -28.093  16.328  1.00 11.32
ATOM    6193  OD1 ASP   926      0.546 -28.668  15.247  1.00 11.50
ATOM    6194  OD2 ASP   926     -0.257 -28.601  17.274  1.00 15.55
ATOM    6195  C   ASP   926      0.283 -25.982  14.186  1.00 11.52
ATOM    6196  O   ASP   926     -0.748 -26.292  13.581  1.00 13.19
ATOM    6197  N   TYR   927      1.477 -25.929  13.610  1.00  9.04
ATOM    6198  CA  TYR   927      1.693 -26.206  12.190  1.00  9.91
ATOM    6199  CB  TYR   927      3.183 -26.037  11.848  1.00 12.47
ATOM    6200  CG  TYR   927      3.599 -26.566  10.486  1.00 13.30
ATOM    6201  CD1 TYR   927      3.408 -25.805   9.332  1.00 15.77
ATOM    6202  CE1 TYR   927      3.776 -26.286   8.072  1.00 17.93
ATOM    6203  CD2 TYR   927      4.175 -27.831  10.351  1.00 14.44
ATOM    6204  CE2 TYR   927      4.548 -28.327   9.092  1.00 15.72
ATOM    6205  CZ  TYR   927      4.345 -27.552   7.961  1.00 18.75
ATOM    6206  OH  TYR   927      4.694 -28.034   6.708  1.00 20.14
ATOM    6207  C   TYR   927      1.256 -27.588  11.745  1.00 12.26
ATOM    6208  O   TYR   927      0.494 -27.732  10.791  1.00 12.34
ATOM    6209  N   SER   928      1.753 -28.602  12.446  1.00 11.45
ATOM    6210  CA  SER   928      1.468 -29.987  12.097  1.00 11.62
ATOM    6211  CB  SER   928      2.167 -30.928  13.077  1.00 12.06
ATOM    6212  OG  SER   928      3.577 -30.869  12.883  1.00 14.47
ATOM    6213  C   SER   928      0.002 -30.361  11.990  1.00 11.37
ATOM    6214  O   SER   928     -0.416 -30.992  11.008  1.00 11.30
ATOM    6215  N   PHE   929     -0.786 -30.004  12.997  1.00 10.21
ATOM    6216  CA  PHE   929     -2.202 -30.337  12.932  1.00  9.78
ATOM    6217  CB  PHE   929     -2.852 -30.267  14.319  1.00 11.80
ATOM    6218  CG  PHE   929     -2.628 -31.504  15.132  1.00 10.16
ATOM    6219  CD1 PHE   929     -1.601 -31.570  16.063  1.00  9.07
ATOM    6220  CD2 PHE   929     -3.383 -32.645  14.879  1.00 13.10
ATOM    6221  CE1 PHE   929     -1.325 -32.766  16.737  1.00 11.64
ATOM    6222  CE2 PHE   929     -3.122 -33.838  15.539  1.00 10.99
ATOM    6223  CZ  PHE   929     -2.092 -33.903  16.465  1.00 10.50
ATOM    6224  C   PHE   929     -2.956 -29.479  11.935  1.00 10.59
ATOM    6225  O   PHE   929     -3.871 -29.970  11.280  1.00 10.20
ATOM    6226  N   ALA   930     -2.579 -28.210  11.798  1.00 10.29
ATOM    6227  CA  ALA   930     -3.263 -27.341  10.835  1.00 10.49
ATOM    6228  CB  ALA   930     -2.724 -25.899  10.940  1.00 10.94
ATOM    6229  C   ALA   930     -3.028 -27.891   9.427  1.00 11.83
ATOM    6230  O   ALA   930     -3.920 -27.870   8.572  1.00 12.93
ATOM    6231  N   LYS   931     -1.807 -28.361   9.192  1.00 11.22
ATOM    6232  CA  LYS   931     -1.425 -28.924   7.894  1.00 12.92
ATOM    6233  CB  LYS   931      0.078 -29.232   7.897  1.00 13.90
ATOM    6234  CG  LYS   931      0.628 -29.953   6.669  1.00 19.23
ATOM    6235  CD  LYS   931      0.716 -29.053   5.467  1.00 22.53
ATOM    6236  CE  LYS   931      1.677 -29.628   4.415  1.00 26.66
ATOM    6237  NZ  LYS   931      1.255 -30.976   3.915  1.00 26.76
ATOM    6238  C   LYS   931     -2.227 -30.198   7.646  1.00 12.48
ATOM    6239  O   LYS   931     -2.737 -30.428   6.543  1.00 14.08
ATOM    6240  N   LEU   932     -2.326 -31.029   8.672  1.00 11.21
ATOM    6241  CA  LEU   932     -3.071 -32.273   8.557  1.00 11.84
ATOM    6242  CB  LEU   932     -2.965 -33.060   9.865  1.00 11.17
ATOM    6243  CG  LEU   932     -3.550 -34.485   9.854  1.00 11.63
ATOM    6244  CD1 LEU   932     -2.882 -35.309  10.946  1.00 10.37
ATOM    6245  CD2 LEU   932     -5.051 -34.430  10.059  1.00 12.21
ATOM    6246  C   LEU   932     -4.534 -31.991   8.212  1.00 12.85
ATOM    6247  O   LEU   932     -5.102 -32.611   7.309  1.00 14.20
ATOM    6248  N   PHE   933     -5.140 -31.039   8.913  1.00 12.43
ATOM    6249  CA  PHE   933     -6.538 -30.699   8.663  1.00 12.70
ATOM    6250  CB  PHE   933     -7.036 -29.670   9.691  1.00 12.30
ATOM    6251  CG  PHE   933     -6.939 -30.139  11.120  1.00 10.75
ATOM    6252  CD1 PHE   933     -7.001 -31.493  11.430  1.00 11.83
ATOM    6253  CD2 PHE   933     -6.788 -29.224  12.162  1.00 11.03
ATOM    6254  CE1 PHE   933     -6.911 -31.931  12.744  1.00 11.61
ATOM    6255  CE2 PHE   933     -6.699 -29.662  13.482  1.00 11.00
ATOM    6256  CZ  PHE   933     -6.758 -31.014  13.774  1.00 12.40
ATOM    6257  C   PHE   933     -6.786 -30.174   7.247  1.00 14.52
ATOM    6258  O   PHE   933     -7.675 -30.661   6.551  1.00 14.70
ATOM    6259  N   ALA   934     -6.010 -29.181   6.822  1.00 14.17
ATOM    6260  CA  ALA   934     -6.178 -28.607   5.488  1.00 16.25
ATOM    6261  CB  ALA   934     -5.177 -27.499   5.266  1.00 15.86
ATOM    6262  C   ALA   934     -6.029 -29.661   4.397  1.00 18.38
ATOM    6263  O   ALA   934     -6.742 -29.631   3.399  1.00 19.61
ATOM    6264  N   ASP   935     -5.094 -30.585   4.586  1.00 18.37
ATOM    6265  CA  ASP   935     -4.873 -31.632   3.605  1.00 20.68
```

```
ATOM   6266  CB   ASP   935      -3.611 -32.422    3.938  1.00 22.05
ATOM   6267  CG   ASP   935      -2.341 -31.618    3.716  1.00 24.26
ATOM   6268  OD1  ASP   935      -2.426 -30.459    3.253  1.00 28.99
ATOM   6269  OD2  ASP   935      -1.256 -32.155    4.001  1.00 24.81
ATOM   6270  C    ASP   935      -6.050 -32.588    3.492  1.00 21.54
ATOM   6271  O    ASP   935      -6.152 -33.332    2.518  1.00 21.57
ATOM   6272  N    GLU   936      -6.937 -32.570    4.481  1.00 21.31
ATOM   6273  CA   GLU   936      -8.107 -33.449    4.466  1.00 23.46
ATOM   6274  CB   GLU   936      -8.300 -34.119    5.830  1.00 22.13
ATOM   6275  CG   GLU   936      -7.196 -35.073    6.234  1.00 25.30
ATOM   6276  CD   GLU   936      -6.944 -36.134    5.184  1.00 26.05
ATOM   6277  OE1  GLU   936      -7.932 -36.697    4.664  1.00 27.53
ATOM   6278  OE2  GLU   936      -5.768 -36.408    4.890  1.00 25.51
ATOM   6279  C    GLU   936      -9.395 -32.727    4.090  1.00 23.90
ATOM   6280  O    GLU   936     -10.433 -33.367    3.928  1.00 23.71
ATOM   6281  N    GLY   937      -9.335 -31.404    3.966  1.00 24.48
ATOM   6282  CA   GLY   937     -10.527 -30.654    3.603  1.00 24.58
ATOM   6283  C    GLY   937     -11.155 -29.831    4.714  1.00 24.70
ATOM   6284  O    GLY   937     -12.136 -29.116    4.481  1.00 22.63
ATOM   6285  N    LEU   938     -10.614 -29.942    5.925  1.00 21.96
ATOM   6286  CA   LEU   938     -11.115 -29.177    7.071  1.00 22.24
ATOM   6287  CB   LEU   938     -10.749 -29.878    8.389  1.00 22.44
ATOM   6288  CG   LEU   938     -11.881 -30.305    9.325  1.00 24.89
ATOM   6289  CD1  LEU   938     -11.300 -30.960   10.565  1.00 20.46
ATOM   6290  CD2  LEU   938     -12.736 -29.116    9.706  1.00 23.65
ATOM   6291  C    LEU   938     -10.397 -27.839    6.979  1.00 22.22
ATOM   6292  O    LEU   938      -9.275 -27.702    7.472  1.00 21.13
ATOM   6293  N    ASN   939     -11.052 -26.860    6.354  1.00 19.30
ATOM   6294  CA   ASN   939     -10.447 -25.546    6.136  1.00 20.12
ATOM   6295  CB   ASN   939     -10.577 -25.159    4.657  1.00 21.00
ATOM   6296  CG   ASN   939     -10.119 -26.267    3.720  1.00 24.01
ATOM   6297  OD1  ASN   939      -9.005 -26.783    3.846  1.00 24.14
ATOM   6298  ND2  ASN   939     -10.974 -26.632    2.768  1.00 24.93
ATOM   6299  C    ASN   939     -10.959 -24.393    7.000  1.00 17.21
ATOM   6300  O    ASN   939     -10.813 -23.234    6.631  1.00 17.54
ATOM   6301  N    VAL   940     -11.564 -24.705    8.139  1.00 15.30
ATOM   6302  CA   VAL   940     -12.038 -23.664    9.048  1.00 12.98
ATOM   6303  CB   VAL   940     -13.566 -23.629    9.156  1.00 13.67
ATOM   6304  CG1  VAL   940     -13.986 -22.479   10.070  1.00 14.67
ATOM   6305  CG2  VAL   940     -14.186 -23.453    7.778  1.00 15.61
ATOM   6306  C    VAL   940     -11.459 -24.001   10.409  1.00 12.24
ATOM   6307  O    VAL   940     -11.854 -24.987   11.032  1.00 11.95
ATOM   6308  N    MET   941     -10.525 -23.182   10.877  1.00 11.66
ATOM   6309  CA   MET   941      -9.887 -23.474   12.145  1.00 11.33
ATOM   6310  CB   MET   941      -8.453 -23.897   11.884  1.00 11.01
ATOM   6311  CG   MET   941      -8.355 -25.076   10.935  1.00 15.14
ATOM   6312  SD   MET   941      -6.605 -25.492   10.723  1.00 13.23
ATOM   6313  CE   MET   941      -6.628 -25.995    9.032  1.00 16.00
ATOM   6314  C    MET   941      -9.935 -22.338   13.136  1.00 11.83
ATOM   6315  O    MET   941      -9.909 -21.166   12.771  1.00 12.66
ATOM   6316  N    LEU   942     -10.020 -22.710   14.404  1.00 10.99
ATOM   6317  CA   LEU   942     -10.094 -21.738   15.469  1.00 12.19
ATOM   6318  CB   LEU   942     -11.409 -21.938   16.240  1.00 15.75
ATOM   6319  CG   LEU   942     -11.850 -21.101   17.453  1.00 20.87
ATOM   6320  CD1  LEU   942     -11.333 -21.740   18.697  1.00 25.90
ATOM   6321  CD2  LEU   942     -11.405 -19.631   17.337  1.00 18.03
ATOM   6322  C    LEU   942      -8.903 -21.821   16.416  1.00 12.22
ATOM   6323  O    LEU   942      -8.639 -22.864   17.009  1.00 11.14
ATOM   6324  N    VAL   943      -8.160 -20.728   16.528  1.00 11.13
ATOM   6325  CA   VAL   943      -7.048 -20.703   17.464  1.00 10.52
ATOM   6326  CB   VAL   943      -5.889 -19.821   16.965  1.00 10.69
ATOM   6327  CG1  VAL   943      -4.792 -19.752   18.031  1.00 11.40
ATOM   6328  CG2  VAL   943      -5.311 -20.422   15.685  1.00 13.59
ATOM   6329  C    VAL   943      -7.721 -20.095   18.690  1.00 11.08
ATOM   6330  O    VAL   943      -7.761 -18.874   18.863  1.00 11.38
ATOM   6331  N    GLY   944      -8.271 -20.965   19.529  1.00 13.26
ATOM   6332  CA   GLY   944      -8.984 -20.502   20.701  1.00 12.63
ATOM   6333  C    GLY   944      -8.220 -20.504   22.000  1.00 11.45
ATOM   6334  O    GLY   944      -7.168 -21.149   22.120  1.00 11.27
ATOM   6335  N    ASP   945      -8.758 -19.791   22.986  1.00 10.87
ATOM   6336  CA   ASP   945      -8.094 -19.714   24.277  1.00 11.19
ATOM   6337  CB   ASP   945      -8.602 -18.519   25.103  1.00 12.84
ATOM   6338  CG   ASP   945     -10.096 -18.559   25.382  1.00 15.40
ATOM   6339  OD1  ASP   945     -10.741 -19.580   25.119  1.00 14.02
ATOM   6340  OD2  ASP   945     -10.612 -17.544   25.888  1.00 16.56
ATOM   6341  C    ASP   945      -8.216 -21.021   25.034  1.00 10.85
ATOM   6342  O    ASP   945      -7.752 -21.137   26.160  1.00 11.48
```

```
ATOM   6343  N    SER   946    -8.829 -22.019  24.392  1.00 10.80
ATOM   6344  CA   SER   946    -8.929 -23.346  25.000  1.00 11.18
ATOM   6345  CB   SER   946    -9.751 -24.282  24.109  1.00 13.04
ATOM   6346  OG   SER   946    -9.361 -24.167  22.750  1.00 13.51
ATOM   6347  C    SER   946    -7.483 -23.841  25.098  1.00 12.33
ATOM   6348  O    SER   946    -7.162 -24.746  25.878  1.00 12.87
ATOM   6349  N    LEU   947    -6.608 -23.241  24.292  1.00  9.71
ATOM   6350  CA   LEU   947    -5.189 -23.620  24.319  1.00 10.28
ATOM   6351  CB   LEU   947    -4.386 -22.834  23.260  1.00  9.98
ATOM   6352  CG   LEU   947    -4.241 -21.308  23.369  1.00 10.69
ATOM   6353  CD1  LEU   947    -3.110 -20.959  24.301  1.00 10.73
ATOM   6354  CD2  LEU   947    -3.955 -20.712  21.980  1.00 11.38
ATOM   6355  C    LEU   947    -4.607 -23.391  25.717  1.00  9.28
ATOM   6356  O    LEU   947    -3.627 -24.038  26.114  1.00 10.82
ATOM   6357  N    GLY   948    -5.214 -22.474  26.468  1.00  9.77
ATOM   6358  CA   GLY   948    -4.743 -22.208  27.819  1.00  9.51
ATOM   6359  C    GLY   948    -4.768 -23.482  28.651  1.00 10.76
ATOM   6360  O    GLY   948    -3.966 -23.647  29.570  1.00 10.19
ATOM   6361  N    MET   949    -5.684 -24.389  28.325  1.00 10.94
ATOM   6362  CA   MET   949    -5.795 -25.637  29.063  1.00 12.90
ATOM   6363  CB   MET   949    -7.271 -25.952  29.349  1.00 12.40
ATOM   6364  CG   MET   949    -7.987 -24.849  30.130  1.00 15.92
ATOM   6365  SD   MET   949    -9.725 -25.184  30.491  1.00 22.24
ATOM   6366  CE   MET   949    -9.565 -26.325  31.869  1.00 23.74
ATOM   6367  C    MET   949    -5.153 -26.794  28.313  1.00 13.79
ATOM   6368  O    MET   949    -4.272 -27.473  28.840  1.00 13.01
ATOM   6369  N    THR   950    -5.577 -27.003  27.072  1.00 13.13
ATOM   6370  CA   THR   950    -5.061 -28.104  26.271  1.00 14.84
ATOM   6371  CB   THR   950    -5.885 -28.243  24.975  1.00 18.87
ATOM   6372  OG1  THR   950    -5.665 -29.536  24.407  1.00 27.10
ATOM   6373  CG2  THR   950    -5.492 -27.177  23.971  1.00 15.75
ATOM   6374  C    THR   950    -3.570 -28.027  25.922  1.00 14.92
ATOM   6375  O    THR   950    -2.887 -29.053  25.875  1.00 14.14
ATOM   6376  N    VAL   951    -3.064 -26.819  25.688  1.00 12.91
ATOM   6377  CA   VAL   951    -1.663 -26.639  25.330  1.00 12.41
ATOM   6378  CB   VAL   951    -1.532 -25.597  24.174  1.00 13.11
ATOM   6379  CG1  VAL   951    -0.074 -25.297  23.888  1.00 13.39
ATOM   6380  CG2  VAL   951    -2.217 -26.131  22.918  1.00 13.74
ATOM   6381  C    VAL   951    -0.769 -26.213  26.502  1.00 12.91
ATOM   6382  O    VAL   951     0.242 -26.855  26.782  1.00 13.09
ATOM   6383  N    GLN   952    -1.146 -25.138  27.190  1.00 10.78
ATOM   6384  CA   GLN   952    -0.354 -24.627  28.312  1.00 12.90
ATOM   6385  CB   GLN   952    -0.668 -23.149  28.540  1.00  9.47
ATOM   6386  CG   GLN   952    -0.456 -22.295  27.299  1.00 10.22
ATOM   6387  CD   GLN   952    -0.885 -20.862  27.509  1.00 10.55
ATOM   6388  OE1  GLN   952    -1.485 -20.527  28.523  1.00 11.30
ATOM   6389  NE2  GLN   952    -0.571 -20.006  26.547  1.00  6.63
ATOM   6390  C    GLN   952    -0.534 -25.385  29.628  1.00 12.56
ATOM   6391  O    GLN   952     0.327 -25.319  30.503  1.00 14.66
ATOM   6392  N    GLY   953    -1.667 -26.061  29.791  1.00 12.38
ATOM   6393  CA   GLY   953    -1.885 -26.821  31.009  1.00 12.40
ATOM   6394  C    GLY   953    -2.460 -26.083  32.206  1.00 12.68
ATOM   6395  O    GLY   953    -2.296 -26.531  33.344  1.00 13.99
ATOM   6396  N    HIS   954    -3.118 -24.953  31.971  1.00 12.29
ATOM   6397  CA   HIS   954    -3.727 -24.206  33.067  1.00 12.78
ATOM   6398  CB   HIS   954    -3.889 -22.731  32.700  1.00 11.26
ATOM   6399  CG   HIS   954    -2.589 -22.013  32.546  1.00 13.33
ATOM   6400  CD2  HIS   954    -2.013 -21.430  31.470  1.00 13.37
ATOM   6401  ND1  HIS   954    -1.706 -21.852  33.591  1.00 13.34
ATOM   6402  CE1  HIS   954    -0.640 -21.200  33.165  1.00 15.92
ATOM   6403  NE2  HIS   954    -0.801 -20.931  31.882  1.00 13.61
ATOM   6404  C    HIS   954    -5.083 -24.814  33.357  1.00 13.36
ATOM   6405  O    HIS   954    -5.605 -25.594  32.555  1.00 13.27
ATOM   6406  N    ASP   955    -5.644 -24.458  34.511  1.00 16.24
ATOM   6407  CA   ASP   955    -6.951 -24.963  34.944  1.00 18.66
ATOM   6408  CB   ASP   955    -7.060 -24.882  36.473  1.00 23.17
ATOM   6409  CG   ASP   955    -6.943 -23.457  36.998  1.00 27.78
ATOM   6410  OD1  ASP   955    -7.656 -22.566  36.495  1.00 31.02
ATOM   6411  OD2  ASP   955    -6.145 -23.231  37.932  1.00 32.90
ATOM   6412  C    ASP   955    -8.131 -24.221  34.315  1.00 17.97
ATOM   6413  O    ASP   955    -9.295 -24.605  34.493  1.00 16.08
ATOM   6414  N    SER   956    -7.825 -23.151  33.593  1.00 15.35
ATOM   6415  CA   SER   956    -8.845 -22.364  32.926  1.00 14.44
ATOM   6416  CB   SER   956    -9.444 -21.320  33.878  1.00 14.03
ATOM   6417  OG   SER   956    -8.533 -20.269  34.155  1.00 12.64
ATOM   6418  C    SER   956    -8.196 -21.676  31.732  1.00 13.94
ATOM   6419  O    SER   956    -6.994 -21.806  31.517  1.00 12.60
```

```
ATOM    6420  N    THR   957       -8.997 -20.955   30.953   1.00 12.70
ATOM    6421  CA   THR   957       -8.495 -20.259   29.774   1.00 11.18
ATOM    6422  CB   THR   957       -9.579 -20.165   28.690   1.00 10.23
ATOM    6423  OG1  THR   957      -10.710 -19.468   29.217   1.00 12.66
ATOM    6424  CG2  THR   957      -10.017 -21.566   28.231   1.00 13.69
ATOM    6425  C    THR   957       -8.047 -18.834   30.114   1.00 10.60
ATOM    6426  O    THR   957       -7.415 -18.164   29.295   1.00  9.48
ATOM    6427  N    LEU   958       -8.373 -18.371   31.318   1.00 11.09
ATOM    6428  CA   LEU   958       -8.042 -16.999   31.718   1.00 10.38
ATOM    6429  CB   LEU   958       -8.483 -16.756   33.167   1.00 11.85
ATOM    6430  CG   LEU   958       -9.962 -16.399   33.380   1.00 14.28
ATOM    6431  CD1  LEU   958      -10.854 -17.587   33.066   1.00 13.28
ATOM    6432  CD2  LEU   958      -10.159 -15.961   34.824   1.00 16.63
ATOM    6433  C    LEU   958       -6.589 -16.545   31.525   1.00 10.13
ATOM    6434  O    LEU   958       -6.336 -15.413   31.106   1.00 10.74
ATOM    6435  N    PRO   959       -5.611 -17.417   31.819   1.00 11.82
ATOM    6436  CD   PRO   959       -5.694 -18.691   32.549   1.00 12.19
ATOM    6437  CA   PRO   959       -4.211 -17.015   31.645   1.00 10.66
ATOM    6438  CB   PRO   959       -3.437 -18.170   32.284   1.00 13.42
ATOM    6439  CG   PRO   959       -4.389 -19.328   32.170   1.00 19.51
ATOM    6440  C    PRO   959       -3.722 -16.711   30.225   1.00 10.61
ATOM    6441  O    PRO   959       -2.674 -16.086   30.054   1.00  9.35
ATOM    6442  N    VAL   960       -4.470 -17.139   29.214   1.00 10.44
ATOM    6443  CA   VAL   960       -4.071 -16.924   27.821   1.00  9.62
ATOM    6444  CB   VAL   960       -5.046 -17.647   26.858   1.00 10.31
ATOM    6445  CG1  VAL   960       -4.578 -17.492   25.408   1.00  9.19
ATOM    6446  CG2  VAL   960       -5.119 -19.116   27.212   1.00 10.51
ATOM    6447  C    VAL   960       -4.017 -15.455   27.455   1.00 11.03
ATOM    6448  O    VAL   960       -4.992 -14.723   27.639   1.00  9.26
ATOM    6449  N    THR   961       -2.890 -15.012   26.917   1.00 11.69
ATOM    6450  CA   THR   961       -2.800 -13.610   26.553   1.00 12.59
ATOM    6451  CB   THR   961       -1.512 -12.975   27.142   1.00 16.60
ATOM    6452  OG1  THR   961       -1.351 -13.392   28.510   1.00 22.57
ATOM    6453  CG2  THR   961       -1.587 -11.461   27.095   1.00 22.84
ATOM    6454  C    THR   961       -2.854 -13.423   25.040   1.00 11.62
ATOM    6455  O    THR   961       -2.785 -14.393   24.272   1.00  8.55
ATOM    6456  N    VAL   962       -2.989 -12.171   24.613   1.00  8.97
ATOM    6457  CA   VAL   962       -3.059 -11.870   23.189   1.00  9.43
ATOM    6458  CB   VAL   962       -3.205 -10.344   22.954   1.00 12.17
ATOM    6459  CG1  VAL   962       -3.243 -10.044   21.457   1.00  9.65
ATOM    6460  CG2  VAL   962       -4.464  -9.842   23.640   1.00 15.11
ATOM    6461  C    VAL   962       -1.813 -12.390   22.486   1.00 10.49
ATOM    6462  O    VAL   962       -1.902 -13.023   21.434   1.00 10.98
ATOM    6463  N    ALA   963       -0.650 -12.142   23.080   1.00  9.85
ATOM    6464  CA   ALA   963        0.602 -12.604   22.489   1.00 10.83
ATOM    6465  CB   ALA   963        1.770 -12.235   23.397   1.00 10.40
ATOM    6466  C    ALA   963        0.564 -14.120   22.258   1.00 10.40
ATOM    6467  O    ALA   963        1.075 -14.593   21.256   1.00 10.00
ATOM    6468  N    ASP   964       -0.031 -14.866   23.195   1.00 12.44
ATOM    6469  CA   ASP   964       -0.144 -16.326   23.067   1.00 11.54
ATOM    6470  CB   ASP   964       -0.818 -16.961   24.289   1.00 11.14
ATOM    6471  CG   ASP   964       -0.006 -16.816   25.572   1.00 13.23
ATOM    6472  OD1  ASP   964        1.239 -16.781   25.528   1.00 11.81
ATOM    6473  OD2  ASP   964       -0.627 -16.761   26.648   1.00 12.48
ATOM    6474  C    ASP   964       -0.966 -16.692   21.833   1.00 11.21
ATOM    6475  O    ASP   964       -0.583 -17.561   21.048   1.00  6.94
ATOM    6476  N    ILE   965       -2.113 -16.037   21.680   1.00  8.84
ATOM    6477  CA   ILE   965       -2.978 -16.292   20.539   1.00  9.08
ATOM    6478  CB   ILE   965       -4.279 -15.435   20.593   1.00  9.58
ATOM    6479  CG2  ILE   965       -5.067 -15.617   19.298   1.00  7.50
ATOM    6480  CG1  ILE   965       -5.125 -15.814   21.813   1.00  8.04
ATOM    6481  CD1  ILE   965       -5.829 -17.185   21.739   1.00  9.87
ATOM    6482  C    ILE   965       -2.237 -15.970   19.244   1.00  9.13
ATOM    6483  O    ILE   965       -2.305 -16.725   18.267   1.00  8.12
ATOM    6484  N    ALA   966       -1.519 -14.851   19.231   1.00  9.33
ATOM    6485  CA   ALA   966       -0.772 -14.453   18.026   1.00  7.88
ATOM    6486  CB   ALA   966       -0.161 -13.046   18.215   1.00 10.51
ATOM    6487  C    ALA   966        0.325 -15.459   17.665   1.00  6.25
ATOM    6488  O    ALA   966        0.623 -15.694   16.484   1.00  8.05
ATOM    6489  N    TYR   967        0.954 -16.023   18.690   1.00  7.24
ATOM    6490  CA   TYR   967        2.007 -17.022   18.487   1.00  7.41
ATOM    6491  CB   TYR   967        2.602 -17.433   19.847   1.00  8.25
ATOM    6492  CG   TYR   967        3.602 -18.579   19.775   1.00  9.15
ATOM    6493  CD1  TYR   967        4.858 -18.406   19.191   1.00 10.05
ATOM    6494  CE1  TYR   967        5.787 -19.444   19.151   1.00 12.77
ATOM    6495  CD2  TYR   967        3.296 -19.826   20.314   1.00  9.48
ATOM    6496  CE2  TYR   967        4.217 -20.876   20.278   1.00 13.60
```

```
ATOM      6497   CZ    TYR    967          5.462  -20.673   19.695   1.00  13.29
ATOM      6498   OH    TYR    967          6.394  -21.697   19.655   1.00  13.05
ATOM      6499   C     TYR    967          1.454  -18.266   17.772   1.00   6.51
ATOM      6500   O     TYR    967          2.013  -18.745   16.776   1.00   5.94
ATOM      6501   N     HIS    968          0.347  -18.783   18.296   1.00   9.58
ATOM      6502   CA    HIS    968         -0.276  -19.994   17.741   1.00   9.37
ATOM      6503   CB    HIS    968         -1.238  -20.593   18.784   1.00   8.45
ATOM      6504   CG    HIS    968         -0.533  -21.162   19.988   1.00   9.03
ATOM      6505   CD2   HIS    968         -0.357  -20.670   21.241   1.00   8.58
ATOM      6506   ND1   HIS    968          0.147  -22.360   19.954   1.00   8.08
ATOM      6507   CE1   HIS    968          0.714  -22.582   21.129   1.00   9.22
ATOM      6508   NE2   HIS    968          0.424  -21.573   21.929   1.00   7.98
ATOM      6509   C     HIS    968         -0.979  -19.714   16.408   1.00  10.86
ATOM      6510   O     HIS    968         -1.057  -20.590   15.536   1.00   9.61
ATOM      6511   N     THR    969         -1.468  -18.486   16.237   1.00  10.09
ATOM      6512   CA    THR    969         -2.135  -18.099   15.001   1.00   8.73
ATOM      6513   CB    THR    969         -2.773  -16.698   15.148   1.00  11.74
ATOM      6514   OG1   THR    969         -3.878  -16.774   16.066   1.00  12.00
ATOM      6515   CG2   THR    969         -3.276  -16.182   13.791   1.00  10.32
ATOM      6516   C     THR    969         -1.160  -18.118   13.822   1.00  10.38
ATOM      6517   O     THR    969         -1.506  -18.557   12.719   1.00  10.24
ATOM      6518   N     ALA    970          0.064  -17.653   14.056   1.00   8.37
ATOM      6519   CA    ALA    970          1.076  -17.624   13.001   1.00   9.33
ATOM      6520   CB    ALA    970          2.285  -16.817   13.467   1.00   7.66
ATOM      6521   C     ALA    970          1.497  -19.046   12.608   1.00  10.42
ATOM      6522   O     ALA    970          1.805  -19.311   11.445   1.00  10.11
ATOM      6523   N     ALA    971          1.497  -19.950   13.583   1.00   7.79
ATOM      6524   CA    ALA    971          1.876  -21.345   13.352   1.00   8.64
ATOM      6525   CB    ALA    971          2.043  -22.065   14.685   1.00  10.14
ATOM      6526   C     ALA    971          0.808  -22.037   12.520   1.00   7.88
ATOM      6527   O     ALA    971          1.112  -22.756   11.570   1.00  10.59
ATOM      6528   N     VAL    972         -0.447  -21.816   12.892   1.00   9.57
ATOM      6529   CA    VAL    972         -1.573  -22.417   12.187   1.00   8.65
ATOM      6530   CB    VAL    972         -2.901  -22.072   12.910   1.00   8.10
ATOM      6531   CG1   VAL    972         -4.098  -22.433   12.040   1.00   7.43
ATOM      6532   CG2   VAL    972         -2.978  -22.839   14.231   1.00  10.94
ATOM      6533   C     VAL    972         -1.604  -21.935   10.740   1.00  10.50
ATOM      6534   O     VAL    972         -1.813  -22.725    9.815   1.00   8.95
ATOM      6535   N     ARG    973         -1.362  -20.641   10.548   1.00  10.52
ATOM      6536   CA    ARG    973         -1.359  -20.052    9.206   1.00  12.00
ATOM      6537   CB    ARG    973         -1.179  -18.526    9.291   1.00  13.02
ATOM      6538   CG    ARG    973         -1.127  -17.808    7.926   1.00  14.67
ATOM      6539   CD    ARG    973         -2.343  -18.128    7.055   1.00  12.64
ATOM      6540   NE    ARG    973         -3.543  -17.405    7.457   1.00  14.38
ATOM      6541   CZ    ARG    973         -4.783  -17.779    7.149   1.00  11.66
ATOM      6542   NH1   ARG    973         -4.993  -18.879    6.440   1.00  15.11
ATOM      6543   NH2   ARG    973         -5.819  -17.045    7.533   1.00  13.03
ATOM      6544   C     ARG    973         -0.260  -20.666    8.349   1.00  11.81
ATOM      6545   O     ARG    973         -0.438  -20.851    7.139   1.00  13.18
ATOM      6546   N     ARG    974          0.880  -20.979    8.960   1.00  10.93
ATOM      6547   CA    ARG    974          1.971  -21.585    8.194   1.00  12.60
ATOM      6548   CB    ARG    974          3.251  -21.701    9.033   1.00  10.96
ATOM      6549   CG    ARG    974          3.826  -20.370    9.472   1.00  13.59
ATOM      6550   CD    ARG    974          5.282  -20.456    9.924   1.00  15.74
ATOM      6551   NE    ARG    974          5.711  -19.147   10.394   1.00  16.85
ATOM      6552   CZ    ARG    974          5.655  -18.750   11.659   1.00  18.61
ATOM      6553   NH1   ARG    974          5.210  -19.574   12.603   1.00  12.75
ATOM      6554   NH2   ARG    974          5.984  -17.502   11.972   1.00  19.12
ATOM      6555   C     ARG    974          1.562  -22.967    7.707   1.00  13.55
ATOM      6556   O     ARG    974          1.899  -23.372    6.592   1.00  14.37
ATOM      6557   N     GLY    975          0.834  -23.693    8.545   1.00  13.23
ATOM      6558   CA    GLY    975          0.400  -25.026    8.164   1.00  13.14
ATOM      6559   C     GLY    975         -0.792  -25.049    7.222   1.00  12.25
ATOM      6560   O     GLY    975         -0.957  -26.002    6.462   1.00  11.97
ATOM      6561   N     ALA    976         -1.617  -24.002    7.273   1.00  11.12
ATOM      6562   CA    ALA    976         -2.817  -23.896    6.441   1.00  11.30
ATOM      6563   CB    ALA    976         -4.050  -24.243    7.271   1.00  10.07
ATOM      6564   C     ALA    976         -2.962  -22.480    5.863   1.00  13.51
ATOM      6565   O     ALA    976         -3.834  -21.722    6.274   1.00  12.15
ATOM      6566   N     PRO    977         -2.118  -22.114    4.889   1.00  14.78
ATOM      6567   CD    PRO    977         -1.121  -22.953    4.206   1.00  17.34
ATOM      6568   CA    PRO    977         -2.179  -20.773    4.288   1.00  15.20
ATOM      6569   CB    PRO    977         -1.014  -20.783    3.304   1.00  15.29
ATOM      6570   CG    PRO    977         -0.939  -22.205    2.885   1.00  20.17
ATOM      6571   C     PRO    977         -3.490  -20.324    3.641   1.00  15.15
ATOM      6572   O     PRO    977         -3.727  -19.121    3.486   1.00  15.71
ATOM      6573   N     ASN    978         -4.348  -21.270    3.275   1.00  15.08
```

```
ATOM   6574  CA  ASN   978     -5.616 -20.924   2.631  1.00 16.97
ATOM   6575  CB  ASN   978     -5.770 -21.725   1.330  1.00 21.84
ATOM   6576  CG  ASN   978     -4.692 -21.397   0.315  1.00 24.37
ATOM   6577  OD1 ASN   978     -4.473 -20.232  -0.020  1.00 26.80
ATOM   6578  ND2 ASN   978     -4.018 -22.423  -0.185  1.00 28.38
ATOM   6579  C   ASN   978     -6.856 -21.137   3.497  1.00 15.81
ATOM   6580  O   ASN   978     -7.978 -20.909   3.046  1.00 16.34
ATOM   6581  N   CYS   979     -6.671 -21.541   4.745  1.00 15.45
ATOM   6582  CA  CYS   979     -7.828 -21.787   5.597  1.00 15.35
ATOM   6583  CB  CYS   979     -7.427 -22.656   6.803  1.00 15.73
ATOM   6584  SG  CYS   979     -6.617 -21.757   8.193  1.00 17.53
ATOM   6585  C   CYS   979     -8.469 -20.495   6.096  1.00 13.52
ATOM   6586  O   CYS   979     -7.869 -19.416   6.035  1.00 15.76
ATOM   6587  N   LEU   980     -9.709 -20.603   6.559  1.00 13.60
ATOM   6588  CA  LEU   980    -10.396 -19.458   7.148  1.00 11.99
ATOM   6589  CB  LEU   980    -11.914 -19.582   7.017  1.00 13.15
ATOM   6590  CG  LEU   980    -12.747 -18.553   7.795  1.00 13.09
ATOM   6591  CD1 LEU   980    -12.439 -17.144   7.313  1.00 17.24
ATOM   6592  CD2 LEU   980    -14.229 -18.871   7.628  1.00 13.80
ATOM   6593  C   LEU   980     -9.970 -19.627   8.604  1.00 11.62
ATOM   6594  O   LEU   980    -10.336 -20.601   9.262  1.00 11.81
ATOM   6595  N   LEU   981     -9.187 -18.677   9.099  1.00 12.13
ATOM   6596  CA  LEU   981     -8.647 -18.760  10.447  1.00  9.55
ATOM   6597  CB  LEU   981     -7.132 -18.495  10.387  1.00 10.99
ATOM   6598  CG  LEU   981     -6.195 -18.853  11.539  1.00 12.12
ATOM   6599  CD1 LEU   981     -4.741 -18.706  11.090  1.00 12.07
ATOM   6600  CD2 LEU   981     -6.472 -17.977  12.747  1.00 15.27
ATOM   6601  C   LEU   981     -9.301 -17.827  11.448  1.00 10.37
ATOM   6602  O   LEU   981     -9.197 -16.604  11.321  1.00 11.18
ATOM   6603  N   LEU   982     -9.984 -18.394  12.445  1.00  9.54
ATOM   6604  CA  LEU   982    -10.604 -17.564  13.485  1.00 10.87
ATOM   6605  CB  LEU   982    -11.948 -18.140  13.951  1.00 12.12
ATOM   6606  CG  LEU   982    -13.182 -17.868  13.095  1.00 13.63
ATOM   6607  CD1 LEU   982    -12.997 -18.480  11.715  1.00 13.85
ATOM   6608  CD2 LEU   982    -14.414 -18.442  13.792  1.00 14.38
ATOM   6609  C   LEU   982     -9.659 -17.532  14.675  1.00 12.49
ATOM   6610  O   LEU   982     -8.991 -18.521  14.951  1.00 12.63
ATOM   6611  N   ALA   983     -9.579 -16.400  15.364  1.00 11.23
ATOM   6612  CA  ALA   983     -8.715 -16.324  16.533  1.00 11.28
ATOM   6613  CB  ALA   983     -7.440 -15.542  16.217  1.00  9.62
ATOM   6614  C   ALA   983     -9.455 -15.676  17.682  1.00  9.95
ATOM   6615  O   ALA   983    -10.043 -14.601  17.537  1.00 11.64
ATOM   6616  N   ASP   984     -9.452 -16.347  18.829  1.00 10.15
ATOM   6617  CA  ASP   984    -10.116 -15.825  20.026  1.00 11.00
ATOM   6618  CB  ASP   984    -10.108 -16.871  21.148  1.00 14.08
ATOM   6619  CG  ASP   984    -11.332 -17.763  21.159  1.00 16.37
ATOM   6620  OD1 ASP   984    -12.305 -17.478  20.438  1.00 14.80
ATOM   6621  OD2 ASP   984    -11.304 -18.755  21.923  1.00 14.64
ATOM   6622  C   ASP   984     -9.390 -14.627  20.592  1.00 10.62
ATOM   6623  O   ASP   984     -8.161 -14.538  20.524  1.00 10.17
ATOM   6624  N   LEU   985    -10.151 -13.688  21.137  1.00 10.79
ATOM   6625  CA  LEU   985     -9.529 -12.587  21.864  1.00 11.87
ATOM   6626  CB  LEU   985    -10.323 -11.295  21.763  1.00 12.83
ATOM   6627  CG  LEU   985    -10.091 -10.510  20.479  1.00 14.09
ATOM   6628  CD1 LEU   985    -10.537  -9.065  20.695  1.00 16.64
ATOM   6629  CD2 LEU   985     -8.613 -10.542  20.102  1.00 17.01
ATOM   6630  C   LEU   985     -9.725 -13.204  23.247  1.00 11.19
ATOM   6631  O   LEU   985    -10.840 -13.590  23.606  1.00 12.15
ATOM   6632  N   PRO   986     -8.651 -13.315  24.034  1.00 10.32
ATOM   6633  CD  PRO   986     -7.280 -12.891  23.695  1.00 10.52
ATOM   6634  CA  PRO   986     -8.698 -13.906  25.372  1.00 11.35
ATOM   6635  CB  PRO   986     -7.238 -14.221  25.633  1.00 12.21
ATOM   6636  CG  PRO   986     -6.563 -13.023  25.015  1.00 12.75
ATOM   6637  C   PRO   986     -9.309 -13.046  26.482  1.00 10.95
ATOM   6638  O   PRO   986     -9.721 -11.914  26.255  1.00 10.33
ATOM   6639  N   PHE   987     -9.364 -13.614  27.684  1.00  9.49
ATOM   6640  CA  PHE   987     -9.913 -12.938  28.856  1.00 10.31
ATOM   6641  CB  PHE   987     -9.524 -13.722  30.118  1.00 10.30
ATOM   6642  CG  PHE   987     -9.770 -12.984  31.418  1.00 11.95
ATOM   6643  CD1 PHE   987    -11.054 -12.630  31.821  1.00 12.08
ATOM   6644  CD2 PHE   987     -8.705 -12.697  32.265  1.00 11.62
ATOM   6645  CE1 PHE   987    -11.272 -11.999  33.054  1.00 13.41
ATOM   6646  CE2 PHE   987     -8.910 -12.070  33.493  1.00 12.09
ATOM   6647  CZ  PHE   987    -10.196 -11.724  33.885  1.00 13.88
ATOM   6648  C   PHE   987     -9.421 -11.491  28.955  1.00 11.22
ATOM   6649  O   PHE   987     -8.223 -11.220  28.861  1.00  9.94
ATOM   6650  N   MET   988    -10.371 -10.579  29.136  1.00 10.88
```

```
ATOM   6651  CA   MET   988   -10.118   -9.153   29.274   1.00 12.00
ATOM   6652  CB   MET   988    -9.447   -8.854   30.630   1.00 11.75
ATOM   6653  CG   MET   988    -9.721   -7.436   31.166   1.00 13.31
ATOM   6654  SD   MET   988   -11.475   -7.116   31.566   1.00 13.55
ATOM   6655  CE   MET   988   -11.538   -7.686   33.263   1.00 18.85
ATOM   6656  C    MET   988    -9.300   -8.512   28.159   1.00 13.38
ATOM   6657  O    MET   988    -8.568   -7.556   28.411   1.00 16.30
ATOM   6658  N    ALA   989    -9.420   -9.019   26.937   1.00 11.97
ATOM   6659  CA   ALA   989    -8.681   -8.450   25.816   1.00 12.87
ATOM   6660  CB   ALA   989    -8.073   -9.568   24.953   1.00 11.39
ATOM   6661  C    ALA   989    -9.585   -7.554   24.959   1.00 12.13
ATOM   6662  O    ALA   989    -9.158   -7.019   23.938   1.00 14.24
ATOM   6663  N    TYR   990   -10.833   -7.391   25.389   1.00 11.11
ATOM   6664  CA   TYR   990   -11.786   -6.538   24.694   1.00 11.34
ATOM   6665  CB   TYR   990   -12.591   -7.352   23.660   1.00 11.56
ATOM   6666  CG   TYR   990   -13.140   -8.668   24.180   1.00 14.52
ATOM   6667  CD1  TYR   990   -14.464   -8.776   24.593   1.00 11.96
ATOM   6668  CE1  TYR   990   -14.979   -9.979   25.082   1.00 14.62
ATOM   6669  CD2  TYR   990   -12.327   -9.802   24.267   1.00 12.94
ATOM   6670  CE2  TYR   990   -12.825  -11.017   24.759   1.00 14.62
ATOM   6671  CZ   TYR   990   -14.156  -11.091   25.163   1.00 15.49
ATOM   6672  OH   TYR   990   -14.675  -12.270   25.655   1.00 18.21
ATOM   6673  C    TYR   990   -12.706   -5.851   25.711   1.00 12.49
ATOM   6674  O    TYR   990   -13.906   -5.689   25.481   1.00 14.32
ATOM   6675  N    ALA   991   -12.116   -5.430   26.827   1.00 12.73
ATOM   6676  CA   ALA   991   -12.844   -4.770   27.913   1.00 12.56
ATOM   6677  CB   ALA   991   -11.927   -4.561   29.104   1.00 11.96
ATOM   6678  C    ALA   991   -13.424   -3.434   27.478   1.00 12.37
ATOM   6679  O    ALA   991   -14.410   -2.963   28.044   1.00 12.98
ATOM   6680  N    THR   992   -12.779   -2.803   26.505   1.00 13.27
ATOM   6681  CA   THR   992   -13.248   -1.527   25.967   1.00 13.52
ATOM   6682  CB   THR   992   -12.390   -0.333   26.462   1.00 15.27
ATOM   6683  OG1  THR   992   -11.069   -0.437   25.918   1.00 15.35
ATOM   6684  CG2  THR   992   -12.286   -0.326   27.983   1.00 15.49
ATOM   6685  C    THR   992   -13.093   -1.640   24.454   1.00 15.81
ATOM   6686  O    THR   992   -12.316   -2.463   23.965   1.00 11.88
ATOM   6687  N    PRO   993   -13.849   -0.839   23.690   1.00 14.26
ATOM   6688  CD   PRO   993   -15.022   -0.033   24.082   1.00 14.65
ATOM   6689  CA   PRO   993   -13.723   -0.912   22.233   1.00 15.27
ATOM   6690  CB   PRO   993   -14.663    0.189   21.756   1.00 13.69
ATOM   6691  CG   PRO   993   -15.781    0.103   22.771   1.00 14.48
ATOM   6692  C    PRO   993   -12.279   -0.675   21.794   1.00 15.17
ATOM   6693  O    PRO   993   -11.745   -1.403   20.955   1.00 14.48
ATOM   6694  N    GLU   994   -11.656    0.343   22.383   1.00 14.90
ATOM   6695  CA   GLU   994   -10.284    0.714   22.068   1.00 16.61
ATOM   6696  CB   GLU   994    -9.847    1.881   22.951   1.00 20.94
ATOM   6697  CG   GLU   994    -8.673    2.652   22.415   1.00 29.96
ATOM   6698  CD   GLU   994    -8.335    3.857   23.277   1.00 32.49
ATOM   6699  OE1  GLU   994    -7.498    3.719   24.199   1.00 35.55
ATOM   6700  OE2  GLU   994    -8.923    4.934   23.038   1.00 33.67
ATOM   6701  C    GLU   994    -9.313   -0.447   22.256   1.00 15.95
ATOM   6702  O    GLU   994    -8.439   -0.675   21.421   1.00 14.70
ATOM   6703  N    GLN   995    -9.455   -1.170   23.361   1.00 14.74
ATOM   6704  CA   GLN   995    -8.586   -2.307   23.625   1.00 14.57
ATOM   6705  CB   GLN   995    -8.758   -2.793   25.058   1.00 15.85
ATOM   6706  CG   GLN   995    -8.325   -1.765   26.084   1.00 22.47
ATOM   6707  CD   GLN   995    -8.360   -2.315   27.480   1.00 26.05
ATOM   6708  OE1  GLN   995    -7.468   -3.057   27.886   1.00 27.48
ATOM   6709  NE2  GLN   995    -9.414   -1.980   28.225   1.00 29.12
ATOM   6710  C    GLN   995    -8.892   -3.433   22.664   1.00 11.23
ATOM   6711  O    GLN   995    -7.992   -4.142   22.222   1.00 12.90
ATOM   6712  N    ALA   996   -10.170   -3.612   22.361   1.00 11.62
ATOM   6713  CA   ALA   996   -10.578   -4.647   21.422   1.00 10.29
ATOM   6714  CB   ALA   996   -12.103   -4.647   21.266   1.00 12.23
ATOM   6715  C    ALA   996    -9.917   -4.396   20.069   1.00 11.82
ATOM   6716  O    ALA   996    -9.402   -5.321   19.431   1.00 11.66
ATOM   6717  N    PHE   997    -9.933   -3.141   19.621   1.00 11.85
ATOM   6718  CA   PHE   997    -9.325   -2.808   18.327   1.00 13.01
ATOM   6719  CB   PHE   997    -9.423   -1.308   18.025   1.00 12.43
ATOM   6720  CG   PHE   997   -10.813   -0.747   18.100   1.00 12.02
ATOM   6721  CD1  PHE   997   -11.921   -1.528   17.811   1.00 14.72
ATOM   6722  CD2  PHE   997   -11.001    0.588   18.443   1.00 15.95
ATOM   6723  CE1  PHE   997   -13.209   -0.992   17.865   1.00 16.49
ATOM   6724  CE2  PHE   997   -12.279    1.140   18.499   1.00 13.96
ATOM   6725  CZ   PHE   997   -13.379    0.344   18.211   1.00 17.62
ATOM   6726  C    PHE   997    -7.846   -3.179   18.300   1.00 13.37
ATOM   6727  O    PHE   997    -7.364   -3.784   17.343   1.00 13.24
```

```
ATOM    6728  N    GLU   998     -7.128  -2.779  19.341  1.00 13.15
ATOM    6729  CA   GLU   998     -5.701  -3.054  19.430  1.00 15.16
ATOM    6730  CB   GLU   998     -5.123  -2.380  20.674  1.00 17.72
ATOM    6731  CG   GLU   998     -3.669  -2.700  20.952  1.00 24.55
ATOM    6732  CD   GLU   998     -2.709  -1.972  20.023  1.00 28.59
ATOM    6733  OE1  GLU   998     -3.168  -1.301  19.068  1.00 30.41
ATOM    6734  OE2  GLU   998     -1.486  -2.077  20.254  1.00 31.76
ATOM    6735  C    GLU   998     -5.389  -4.554  19.461  1.00 12.56
ATOM    6736  O    GLU   998     -4.523  -5.029  18.730  1.00 10.73
ATOM    6737  N    ASN   999     -6.093  -5.303  20.301  1.00 12.22
ATOM    6738  CA   ASN   999     -5.833  -6.729  20.393  1.00 12.09
ATOM    6739  CB   ASN   999     -6.429  -7.280  21.694  1.00 11.99
ATOM    6740  CG   ASN   999     -5.719  -6.735  22.912  1.00 14.10
ATOM    6741  OD1  ASN   999     -4.503  -6.514  22.869  1.00 13.95
ATOM    6742  ND2  ASN   999     -6.456  -6.520  24.010  1.00 13.68
ATOM    6743  C    ASN   999     -6.304  -7.523  19.182  1.00 12.22
ATOM    6744  O    ASN   999     -5.667  -8.504  18.775  1.00 10.24
ATOM    6745  N    ALA  1000     -7.411  -7.101  18.589  1.00 11.49
ATOM    6746  CA   ALA  1000     -7.912  -7.777  17.399  1.00 12.27
ATOM    6747  CB   ALA  1000     -9.280  -7.201  16.998  1.00 11.29
ATOM    6748  C    ALA  1000     -6.894  -7.571  16.265  1.00 12.84
ATOM    6749  O    ALA  1000     -6.617  -8.488  15.493  1.00 11.51
ATOM    6750  N    ALA  1001     -6.325  -6.371  16.174  1.00 12.62
ATOM    6751  CA   ALA  1001     -5.340  -6.094  15.128  1.00 12.98
ATOM    6752  CB   ALA  1001     -4.941  -4.619  15.165  1.00 11.69
ATOM    6753  C    ALA  1001     -4.107  -6.978  15.300  1.00 11.52
ATOM    6754  O    ALA  1001     -3.545  -7.477  14.324  1.00 11.98
ATOM    6755  N    THR  1002     -3.681  -7.165  16.542  1.00 10.66
ATOM    6756  CA   THR  1002     -2.515  -8.007  16.804  1.00 11.02
ATOM    6757  CB   THR  1002     -2.228  -8.117  18.319  1.00 11.27
ATOM    6758  OG1  THR  1002     -1.930  -6.813  18.841  1.00 12.88
ATOM    6759  CG2  THR  1002     -1.036  -9.040  18.584  1.00 11.56
ATOM    6760  C    THR  1002     -2.739  -9.411  16.246  1.00 10.94
ATOM    6761  O    THR  1002     -1.897  -9.952  15.523  1.00 11.20
ATOM    6762  N    VAL  1003     -3.881 -10.005  16.563  1.00  9.24
ATOM    6763  CA   VAL  1003     -4.154 -11.372  16.102  1.00  9.83
ATOM    6764  CB   VAL  1003     -5.342 -11.991  16.897  1.00 11.74
ATOM    6765  CG1  VAL  1003     -6.680 -11.511  16.373  1.00 10.79
ATOM    6766  CG2  VAL  1003     -5.231 -13.484  16.875  1.00 19.69
ATOM    6767  C    VAL  1003     -4.374 -11.466  14.593  1.00 10.01
ATOM    6768  O    VAL  1003     -3.999 -12.462  13.965  1.00  7.78
ATOM    6769  N    MET  1004     -4.967 -10.423  14.013  1.00  8.67
ATOM    6770  CA   MET  1004     -5.205 -10.368  12.570  1.00 11.82
ATOM    6771  CB   MET  1004     -6.107  -9.174  12.213  1.00 11.14
ATOM    6772  CG   MET  1004     -7.523  -9.240  12.728  1.00 16.34
ATOM    6773  SD   MET  1004     -8.546 -10.464  11.934  1.00 19.40
ATOM    6774  CE   MET  1004     -8.653  -9.772  10.242  1.00 17.67
ATOM    6775  C    MET  1004     -3.878 -10.211  11.825  1.00 10.89
ATOM    6776  O    MET  1004     -3.665 -10.860  10.807  1.00 13.67
ATOM    6777  N    ARG  1005     -2.988  -9.345  12.311  1.00 11.14
ATOM    6778  CA   ARG  1005     -1.708  -9.184  11.619  1.00 11.02
ATOM    6779  CB   ARG  1005     -0.862  -8.066  12.234  1.00 12.00
ATOM    6780  CG   ARG  1005     -1.490  -6.689  12.114  1.00 16.37
ATOM    6781  CD   ARG  1005     -0.472  -5.584  12.356  1.00 15.62
ATOM    6782  NE   ARG  1005     -1.134  -4.292  12.558  1.00 17.19
ATOM    6783  CZ   ARG  1005     -1.491  -3.811  13.744  1.00 16.30
ATOM    6784  NH1  ARG  1005     -1.248  -4.501  14.854  1.00 16.09
ATOM    6785  NH2  ARG  1005     -2.110  -2.646  13.818  1.00 17.74
ATOM    6786  C    ARG  1005     -0.916 -10.491  11.659  1.00 11.70
ATOM    6787  O    ARG  1005     -0.139 -10.787  10.750  1.00 11.26
ATOM    6788  N    ALA  1006     -1.142 -11.266  12.716  1.00 11.42
ATOM    6789  CA   ALA  1006     -0.475 -12.540  12.918  1.00 11.69
ATOM    6790  CB   ALA  1006     -0.660 -12.996  14.363  1.00 12.29
ATOM    6791  C    ALA  1006     -0.955 -13.639  11.963  1.00 14.06
ATOM    6792  O    ALA  1006     -0.333 -14.703  11.864  1.00 13.17
ATOM    6793  N    GLY  1007     -2.068 -13.399  11.280  1.00 11.67
ATOM    6794  CA   GLY  1007     -2.558 -14.384  10.336  1.00 13.30
ATOM    6795  C    GLY  1007     -4.043 -14.701  10.358  1.00 11.83
ATOM    6796  O    GLY  1007     -4.546 -15.400   9.474  1.00 13.69
ATOM    6797  N    ALA  1008     -4.750 -14.183  11.354  1.00 10.96
ATOM    6798  CA   ALA  1008     -6.177 -14.430  11.484  1.00 10.68
ATOM    6799  CB   ALA  1008     -6.641 -14.059  12.894  1.00 11.65
ATOM    6800  C    ALA  1008     -7.010 -13.665  10.453  1.00 13.14
ATOM    6801  O    ALA  1008     -6.591 -12.624   9.951  1.00 14.60
ATOM    6802  N    ASN  1009     -8.193 -14.192  10.151  1.00 12.15
ATOM    6803  CA   ASN  1009     -9.115 -13.567   9.200  1.00 11.79
ATOM    6804  CB   ASN  1009     -9.652 -14.579   8.197  1.00 13.02
```

```
ATOM    6805  CG   ASN  1009      -8.583 -15.225    7.376   1.00 13.44
ATOM    6806  OD1  ASN  1009      -7.839 -14.559    6.664   1.00 15.40
ATOM    6807  ND2  ASN  1009      -8.507 -16.550    7.457   1.00 10.54
ATOM    6808  C    ASN  1009     -10.327 -13.057    9.954   1.00 11.95
ATOM    6809  O    ASN  1009     -11.119 -12.276    9.429   1.00 11.36
ATOM    6810  N    MET  1010     -10.493 -13.536   11.177   1.00 11.61
ATOM    6811  CA   MET  1010     -11.660 -13.165   11.956   1.00 12.67
ATOM    6812  CB   MET  1010     -12.824 -14.052   11.513   1.00 10.94
ATOM    6813  CG   MET  1010     -14.101 -13.892   12.297   1.00 16.45
ATOM    6814  SD   MET  1010     -15.423 -14.958   11.623   1.00 18.40
ATOM    6815  CE   MET  1010     -16.334 -13.742   10.618   1.00 17.91
ATOM    6816  C    MET  1010     -11.357 -13.364   13.431   1.00 12.79
ATOM    6817  O    MET  1010     -10.541 -14.207   13.792   1.00 10.90
ATOM    6818  N    VAL  1011     -12.005 -12.571   14.276   1.00 11.92
ATOM    6819  CA   VAL  1011     -11.787 -12.664   15.701   1.00 12.96
ATOM    6820  CB   VAL  1011     -11.327 -11.300   16.246   1.00 14.64
ATOM    6821  CG1  VAL  1011     -11.267 -11.331   17.739   1.00 21.61
ATOM    6822  CG2  VAL  1011      -9.950 -10.951   15.668   1.00 14.08
ATOM    6823  C    VAL  1011     -13.064 -13.121   16.397   1.00 11.60
ATOM    6824  O    VAL  1011     -14.165 -12.769   15.978   1.00 11.44
ATOM    6825  N    LYS  1012     -12.924 -13.940   17.436   1.00 11.24
ATOM    6826  CA   LYS  1012     -14.088 -14.399   18.187   1.00 10.46
ATOM    6827  CB   LYS  1012     -14.130 -15.928   18.292   1.00 12.52
ATOM    6828  CG   LYS  1012     -15.317 -16.422   19.124   1.00 14.74
ATOM    6829  CD   LYS  1012     -15.735 -17.857   18.795   1.00 15.78
ATOM    6830  CE   LYS  1012     -14.687 -18.869   19.223   1.00 14.61
ATOM    6831  NZ   LYS  1012     -14.548 -18.899   20.722   1.00 13.04
ATOM    6832  C    LYS  1012     -14.050 -13.810   19.590   1.00 11.96
ATOM    6833  O    LYS  1012     -13.015 -13.831   20.261   1.00 13.92
ATOM    6834  N    ILE  1013     -15.186 -13.280   20.028   1.00 12.31
ATOM    6835  CA   ILE  1013     -15.292 -12.693   21.357   1.00 13.37
ATOM    6836  CB   ILE  1013     -15.325 -11.149   21.278   1.00 13.64
ATOM    6837  CG2  ILE  1013     -13.959 -10.625   20.802   1.00 13.46
ATOM    6838  CG1  ILE  1013     -16.419 -10.690   20.313   1.00 14.17
ATOM    6839  CD1  ILE  1013     -16.605  -9.181   20.299   1.00 16.29
ATOM    6840  C    ILE  1013     -16.540 -13.213   22.062   1.00 14.88
ATOM    6841  O    ILE  1013     -17.538 -13.525   21.414   1.00 14.92
ATOM    6842  N    GLU  1014     -16.475 -13.304   23.388   1.00 14.84
ATOM    6843  CA   GLU  1014     -17.581 -13.814   24.199   1.00 17.49
ATOM    6844  CB   GLU  1014     -17.039 -14.690   25.334   1.00 14.94
ATOM    6845  CG   GLU  1014     -16.318 -15.943   24.884   1.00 18.47
ATOM    6846  CD   GLU  1014     -15.753 -16.757   26.052   1.00 18.83
ATOM    6847  OE1  GLU  1014     -16.166 -16.532   27.205   1.00 20.52
ATOM    6848  OE2  GLU  1014     -14.900 -17.629   25.811   1.00 20.24
ATOM    6849  C    GLU  1014     -18.441 -12.722   24.818   1.00 17.91
ATOM    6850  O    GLU  1014     -17.928 -11.775   25.410   1.00 18.79
ATOM    6851  N    GLY  1015     -19.755 -12.862   24.704   1.00 19.87
ATOM    6852  CA   GLY  1015     -20.623 -11.864   25.292   1.00 20.15
ATOM    6853  C    GLY  1015     -21.824 -11.530   24.445   1.00 22.90
ATOM    6854  O    GLY  1015     -21.869 -11.843   23.254   1.00 22.51
ATOM    6855  N    GLY  1016     -22.802 -10.879   25.064   1.00 23.73
ATOM    6856  CA   GLY  1016     -24.010 -10.523   24.345   1.00 24.26
ATOM    6857  C    GLY  1016     -24.190  -9.048   24.052   1.00 24.54
ATOM    6858  O    GLY  1016     -23.329  -8.408   23.448   1.00 23.49
ATOM    6859  N    GLU  1017     -25.329  -8.518   24.486   1.00 24.54
ATOM    6860  CA   GLU  1017     -25.685  -7.118   24.273   1.00 25.84
ATOM    6861  CB   GLU  1017     -26.866  -6.730   25.170   1.00 29.29
ATOM    6862  CG   GLU  1017     -28.235  -6.870   24.538   1.00 37.68
ATOM    6863  CD   GLU  1017     -28.601  -5.692   23.644   1.00 39.61
ATOM    6864  OE1  GLU  1017     -27.961  -5.504   22.590   1.00 39.67
ATOM    6865  OE2  GLU  1017     -29.533  -4.943   24.012   1.00 43.46
ATOM    6866  C    GLU  1017     -24.565  -6.113   24.499   1.00 22.37
ATOM    6867  O    GLU  1017     -24.354  -5.229   23.673   1.00 20.28
ATOM    6868  N    TRP  1018     -23.857  -6.240   25.617   1.00 21.77
ATOM    6869  CA   TRP  1018     -22.794  -5.295   25.939   1.00 20.32
ATOM    6870  CB   TRP  1018     -22.173  -5.621   27.309   1.00 20.17
ATOM    6871  CG   TRP  1018     -21.268  -6.820   27.342   1.00 18.75
ATOM    6872  CD2  TRP  1018     -19.835  -6.807   27.366   1.00 18.11
ATOM    6873  CE2  TRP  1018     -19.405  -8.151   27.412   1.00 18.06
ATOM    6874  CE3  TRP  1018     -18.872  -5.790   27.350   1.00 16.22
ATOM    6875  CD1  TRP  1018     -21.640  -8.129   27.373   1.00 20.49
ATOM    6876  NE1  TRP  1018     -20.527  -8.938   27.420   1.00 20.28
ATOM    6877  CZ2  TRP  1018     -18.049  -8.506   27.446   1.00 18.14
ATOM    6878  CZ3  TRP  1018     -17.523  -6.146   27.384   1.00 17.33
ATOM    6879  CH2  TRP  1018     -17.129  -7.495   27.430   1.00 16.12
ATOM    6880  C    TRP  1018     -21.692  -5.171   24.896   1.00 18.60
ATOM    6881  O    TRP  1018     -20.943  -4.193   24.901   1.00 20.29
```

```
ATOM   6882  N    LEU  1019    -21.612  -6.143  23.992  1.00 17.89
ATOM   6883  CA   LEU  1019    -20.591  -6.150  22.942  1.00 18.29
ATOM   6884  CB   LEU  1019    -20.134  -7.581  22.671  1.00 18.15
ATOM   6885  CG   LEU  1019    -19.257  -8.224  23.742  1.00 18.92
ATOM   6886  CD1  LEU  1019    -18.970  -9.657  23.341  1.00 18.85
ATOM   6887  CD2  LEU  1019    -17.969  -7.431  23.886  1.00 17.98
ATOM   6888  C    LEU  1019    -21.024  -5.538  21.613  1.00 19.71
ATOM   6889  O    LEU  1019    -20.206  -5.395  20.707  1.00 18.84
ATOM   6890  N    VAL  1020    -22.301  -5.190  21.496  1.00 19.00
ATOM   6891  CA   VAL  1020    -22.833  -4.612  20.272  1.00 19.17
ATOM   6892  CB   VAL  1020    -24.281  -4.105  20.489  1.00 20.01
ATOM   6893  CG1  VAL  1020    -24.714  -3.204  19.347  1.00 18.49
ATOM   6894  CG2  VAL  1020    -25.224  -5.301  20.579  1.00 19.83
ATOM   6895  C    VAL  1020    -21.987  -3.478  19.708  1.00 20.01
ATOM   6896  O    VAL  1020    -21.596  -3.505  18.540  1.00 20.16
ATOM   6897  N    GLU  1021    -21.697  -2.486  20.539  1.00 20.60
ATOM   6898  CA   GLU  1021    -20.899  -1.351  20.107  1.00 21.01
ATOM   6899  CB   GLU  1021    -20.744  -0.355  21.254  1.00 26.20
ATOM   6900  CG   GLU  1021    -19.763   0.761  20.952  1.00 30.81
ATOM   6901  CD   GLU  1021    -19.791   1.857  21.994  1.00 35.68
ATOM   6902  OE1  GLU  1021    -19.602   1.551  23.193  1.00 38.35
ATOM   6903  OE2  GLU  1021    -20.002   3.026  21.606  1.00 38.75
ATOM   6904  C    GLU  1021    -19.523  -1.772  19.606  1.00 19.64
ATOM   6905  O    GLU  1021    -19.062  -1.327  18.555  1.00 18.56
ATOM   6906  N    THR  1022    -18.862  -2.624  20.375  1.00 18.69
ATOM   6907  CA   THR  1022    -17.539  -3.107  20.010  1.00 17.98
ATOM   6908  CB   THR  1022    -17.001  -4.052  21.103  1.00 18.81
ATOM   6909  OG1  THR  1022    -16.885  -3.323  22.329  1.00 16.49
ATOM   6910  CG2  THR  1022    -15.633  -4.606  20.721  1.00 17.33
ATOM   6911  C    THR  1022    -17.575  -3.831  18.664  1.00 17.26
ATOM   6912  O    THR  1022    -16.707  -3.630  17.808  1.00 18.36
ATOM   6913  N    VAL  1023    -18.588  -4.670  18.478  1.00 17.37
ATOM   6914  CA   VAL  1023    -18.742  -5.415  17.232  1.00 16.94
ATOM   6915  CB   VAL  1023    -19.918  -6.402  17.317  1.00 16.32
ATOM   6916  CG1  VAL  1023    -20.170  -7.033  15.937  1.00 19.55
ATOM   6917  CG2  VAL  1023    -19.606  -7.484  18.338  1.00 17.66
ATOM   6918  C    VAL  1023    -18.972  -4.484  16.048  1.00 18.30
ATOM   6919  O    VAL  1023    -18.386  -4.666  14.976  1.00 16.65
ATOM   6920  N    GLN  1024    -19.828  -3.488  16.242  1.00 18.44
ATOM   6921  CA   GLN  1024    -20.125  -2.540  15.169  1.00 20.28
ATOM   6922  CB   GLN  1024    -21.152  -1.498  15.631  1.00 22.35
ATOM   6923  CG   GLN  1024    -22.494  -2.088  16.057  1.00 28.92
ATOM   6924  CD   GLN  1024    -23.512  -1.029  16.479  1.00 31.59
ATOM   6925  OE1  GLN  1024    -23.238  -0.195  17.349  1.00 32.26
ATOM   6926  NE2  GLN  1024    -24.700  -1.069  15.871  1.00 31.37
ATOM   6927  C    GLN  1024    -18.841  -1.840  14.740  1.00 18.28
ATOM   6928  O    GLN  1024    -18.519  -1.791  13.554  1.00 19.29
ATOM   6929  N    MET  1025    -18.104  -1.319  15.717  1.00 16.21
ATOM   6930  CA   MET  1025    -16.866  -0.608  15.445  1.00 16.11
ATOM   6931  CB   MET  1025    -16.388   0.105  16.716  1.00 17.05
ATOM   6932  CG   MET  1025    -17.392   1.124  17.243  1.00 19.13
ATOM   6933  SD   MET  1025    -16.834   1.990  18.708  1.00 22.52
ATOM   6934  CE   MET  1025    -15.842   3.246  17.969  1.00 20.06
ATOM   6935  C    MET  1025    -15.761  -1.493  14.871  1.00 15.89
ATOM   6936  O    MET  1025    -15.026  -1.070  13.978  1.00 15.39
ATOM   6937  N    LEU  1026    -15.630  -2.719  15.374  1.00 15.63
ATOM   6938  CA   LEU  1026    -14.602  -3.614  14.852  1.00 14.77
ATOM   6939  CB   LEU  1026    -14.660  -4.970  15.563  1.00 13.09
ATOM   6940  CG   LEU  1026    -13.841  -4.992  16.852  1.00 12.23
ATOM   6941  CD1  LEU  1026    -14.160  -6.247  17.654  1.00 10.28
ATOM   6942  CD2  LEU  1026    -12.354  -4.920  16.493  1.00  9.62
ATOM   6943  C    LEU  1026    -14.771  -3.821  13.353  1.00 15.22
ATOM   6944  O    LEU  1026    -13.810  -3.709  12.588  1.00 13.79
ATOM   6945  N    THR  1027    -16.003  -4.115  12.947  1.00 18.88
ATOM   6946  CA   THR  1027    -16.337  -4.344  11.544  1.00 23.03
ATOM   6947  CB   THR  1027    -17.863  -4.600  11.369  1.00 25.20
ATOM   6948  OG1  THR  1027    -18.251  -5.736  12.150  1.00 29.61
ATOM   6949  CG2  THR  1027    -18.198  -4.884   9.905  1.00 30.36
ATOM   6950  C    THR  1027    -15.923  -3.177  10.645  1.00 23.34
ATOM   6951  O    THR  1027    -15.251  -3.378   9.630  1.00 21.92
ATOM   6952  N    GLU  1028    -16.315  -1.957  11.005  1.00 23.53
ATOM   6953  CA   GLU  1028    -15.945  -0.807  10.181  1.00 24.72
ATOM   6954  CB   GLU  1028    -16.678   0.466  10.643  1.00 27.14
ATOM   6955  CG   GLU  1028    -17.060   0.487  12.105  1.00 28.12
ATOM   6956  CD   GLU  1028    -17.832   1.740  12.511  1.00 25.37
ATOM   6957  OE1  GLU  1028    -18.914   2.007  11.949  1.00 26.88
ATOM   6958  OE2  GLU  1028    -17.362   2.462  13.408  1.00 24.11
```

```
ATOM   6959  C    GLU  1028   -14.433   -0.597   10.173  1.00 24.26
ATOM   6960  O    GLU  1028   -13.895    0.084    9.299  1.00 24.65
ATOM   6961  N    ARG  1029   -13.740   -1.196   11.137  1.00 21.79
ATOM   6962  CA   ARG  1029   -12.295   -1.075   11.178  1.00 19.58
ATOM   6963  CB   ARG  1029   -11.830   -0.831   12.613  1.00 18.96
ATOM   6964  CG   ARG  1029   -12.242    0.557   13.083  1.00 20.16
ATOM   6965  CD   ARG  1029   -12.178    0.735   14.577  1.00 16.37
ATOM   6966  NE   ARG  1029   -12.643    2.075   14.944  1.00 18.38
ATOM   6967  CZ   ARG  1029   -13.881    2.524   14.749  1.00 15.81
ATOM   6968  NH1  ARG  1029   -14.800    1.745   14.192  1.00 15.80
ATOM   6969  NH2  ARG  1029   -14.202    3.762   15.104  1.00 17.73
ATOM   6970  C    ARG  1029   -11.613   -2.290   10.548  1.00 18.96
ATOM   6971  O    ARG  1029   -10.479   -2.628   10.882  1.00 18.45
ATOM   6972  N    ALA  1030   -12.341   -2.939    9.638  1.00 18.34
ATOM   6973  CA   ALA  1030   -11.849   -4.081    8.869  1.00 16.44
ATOM   6974  CB   ALA  1030   -10.532   -3.702    8.187  1.00 17.45
ATOM   6975  C    ALA  1030   -11.683   -5.404    9.599  1.00 15.43
ATOM   6976  O    ALA  1030   -11.004   -6.292    9.094  1.00 15.15
ATOM   6977  N    VAL  1031   -12.305   -5.544   10.766  1.00 14.41
ATOM   6978  CA   VAL  1031   -12.205   -6.783   11.529  1.00 14.99
ATOM   6979  CB   VAL  1031   -11.741   -6.513   12.990  1.00 15.55
ATOM   6980  CG1  VAL  1031   -11.730   -7.811   13.792  1.00 15.39
ATOM   6981  CG2  VAL  1031   -10.351   -5.899   12.988  1.00 16.52
ATOM   6982  C    VAL  1031   -13.523   -7.548   11.587  1.00 14.09
ATOM   6983  O    VAL  1031   -14.499   -7.074   12.175  1.00 14.29
ATOM   6984  N    PRO  1032   -13.581   -8.726   10.941  1.00 13.45
ATOM   6985  CD   PRO  1032   -12.645   -9.221    9.920  1.00 14.69
ATOM   6986  CA   PRO  1032   -14.806   -9.532   10.965  1.00 13.56
ATOM   6987  CB   PRO  1032   -14.605  -10.534    9.827  1.00 13.39
ATOM   6988  CG   PRO  1032   -13.133  -10.622    9.698  1.00 19.95
ATOM   6989  C    PRO  1032   -14.872  -10.187   12.337  1.00 13.75
ATOM   6990  O    PRO  1032   -13.850  -10.572   12.905  1.00 14.39
ATOM   6991  N    VAL  1033   -16.077  -10.298   12.870  1.00 13.91
ATOM   6992  CA   VAL  1033   -16.265  -10.846   14.200  1.00 13.00
ATOM   6993  CB   VAL  1033   -16.871   -9.776   15.137  1.00 13.98
ATOM   6994  CG1  VAL  1033   -17.112  -10.343   16.534  1.00 12.93
ATOM   6995  CG2  VAL  1033   -15.968   -8.566   15.189  1.00 12.31
ATOM   6996  C    VAL  1033   -17.175  -12.047   14.239  1.00 14.20
ATOM   6997  O    VAL  1033   -18.219  -12.078   13.580  1.00 13.95
ATOM   6998  N    CYS  1034   -16.768  -13.040   15.019  1.00 12.45
ATOM   6999  CA   CYS  1034   -17.577  -14.232   15.222  1.00 14.01
ATOM   7000  CB   CYS  1034   -16.739  -15.504   15.078  1.00 12.96
ATOM   7001  SG   CYS  1034   -17.660  -17.005   15.555  1.00 15.25
ATOM   7002  C    CYS  1034   -18.057  -14.097   16.661  1.00 13.22
ATOM   7003  O    CYS  1034   -17.251  -13.898   17.569  1.00 12.90
ATOM   7004  N    GLY  1035   -19.370  -14.176   16.850  1.00 13.48
ATOM   7005  CA   GLY  1035   -19.940  -14.071   18.172  1.00 15.44
ATOM   7006  C    GLY  1035   -19.826  -15.397   18.897  1.00 15.74
ATOM   7007  O    GLY  1035   -19.491  -16.422   18.294  1.00 16.26
ATOM   7008  N    HIS  1036   -20.107  -15.372   20.196  1.00 15.37
ATOM   7009  CA   HIS  1036   -20.027  -16.560   21.030  1.00 15.58
ATOM   7010  CB   HIS  1036   -18.582  -16.744   21.507  1.00 16.13
ATOM   7011  CG   HIS  1036   -18.335  -18.021   22.246  1.00 17.83
ATOM   7012  CD2  HIS  1036   -19.187  -18.943   22.755  1.00 19.01
ATOM   7013  ND1  HIS  1036   -17.065  -18.479   22.525  1.00 18.18
ATOM   7014  CE1  HIS  1036   -17.145  -19.629   23.171  1.00 20.16
ATOM   7015  NE2  HIS  1036   -18.422  -19.933   23.324  1.00 18.10
ATOM   7016  C    HIS  1036   -20.971  -16.397   22.223  1.00 15.56
ATOM   7017  O    HIS  1036   -20.705  -15.616   23.135  1.00 14.91
ATOM   7018  N    LEU  1037   -22.072  -17.139   22.201  1.00 14.85
ATOM   7019  CA   LEU  1037   -23.079  -17.075   23.254  1.00 19.01
ATOM   7020  CB   LEU  1037   -24.404  -16.551   22.685  1.00 19.62
ATOM   7021  CG   LEU  1037   -24.384  -15.141   22.079  1.00 20.40
ATOM   7022  CD1  LEU  1037   -25.681  -14.870   21.323  1.00 21.01
ATOM   7023  CD2  LEU  1037   -24.184  -14.127   23.196  1.00 22.34
ATOM   7024  C    LEU  1037   -23.327  -18.434   23.884  1.00 20.82
ATOM   7025  O    LEU  1037   -22.970  -19.475   23.320  1.00 20.02
ATOM   7026  N    GLY  1038   -23.967  -18.410   25.048  1.00 22.55
ATOM   7027  CA   GLY  1038   -24.271  -19.637   25.764  1.00 25.04
ATOM   7028  C    GLY  1038   -23.304  -19.816   26.909  1.00 26.30
ATOM   7029  O    GLY  1038   -23.171  -18.944   27.767  1.00 27.66
ATOM   7030  N    LEU  1039   -22.619  -20.951   26.925  1.00 28.14
ATOM   7031  CA   LEU  1039   -21.655  -21.221   27.976  1.00 29.16
ATOM   7032  CB   LEU  1039   -21.525  -22.736   28.173  1.00 31.16
ATOM   7033  CG   LEU  1039   -20.968  -23.253   29.503  1.00 33.32
ATOM   7034  CD1  LEU  1039   -21.160  -24.764   29.570  1.00 35.58
ATOM   7035  CD2  LEU  1039   -19.503  -22.891   29.641  1.00 34.73
```

```
ATOM   7036  C   LEU  1039    -20.310 -20.600  27.580  1.00 28.75
ATOM   7037  O   LEU  1039    -19.542 -21.188  26.820  1.00 30.49
ATOM   7038  N   THR  1040    -20.049 -19.397  28.085  1.00 29.32
ATOM   7039  CA  THR  1040    -18.806 -18.677  27.806  1.00 29.10
ATOM   7040  CB  THR  1040    -19.043 -17.147  27.758  1.00 30.20
ATOM   7041  OG1 THR  1040    -19.892 -16.753  28.844  1.00 29.44
ATOM   7042  CG2 THR  1040    -19.688 -16.746  26.445  1.00 32.08
ATOM   7043  C   THR  1040    -17.781 -18.999  28.893  1.00 28.48
ATOM   7044  O   THR  1040    -17.808 -18.420  29.980  1.00 29.20
ATOM   7045  N   PRO  1041    -16.850 -19.920  28.597  1.00 28.41
ATOM   7046  CD  PRO  1041    -16.620 -20.464  27.246  1.00 28.58
ATOM   7047  CA  PRO  1041    -15.797 -20.363  29.518  1.00 27.50
ATOM   7048  CB  PRO  1041    -14.949 -21.298  28.652  1.00 28.87
ATOM   7049  CG  PRO  1041    -15.152 -20.773  27.279  1.00 32.35
ATOM   7050  C   PRO  1041    -14.972 -19.275  30.206  1.00 26.35
ATOM   7051  O   PRO  1041    -14.484 -19.479  31.320  1.00 24.47
ATOM   7052  N   GLN  1042    -14.802 -18.126  29.558  1.00 23.87
ATOM   7053  CA  GLN  1042    -14.043 -17.050  30.188  1.00 23.26
ATOM   7054  CB  GLN  1042    -13.872 -15.868  29.223  1.00 22.94
ATOM   7055  CG  GLN  1042    -12.682 -16.011  28.273  1.00 19.12
ATOM   7056  CD  GLN  1042    -12.640 -14.915  27.228  1.00 22.27
ATOM   7057  OE1 GLN  1042    -13.082 -13.792  27.478  1.00 21.44
ATOM   7058  NE2 GLN  1042    -12.098 -15.231  26.049  1.00 19.01
ATOM   7059  C   GLN  1042    -14.737 -16.597  31.475  1.00 22.74
ATOM   7060  O   GLN  1042    -14.084 -16.144  32.410  1.00 22.65
ATOM   7061  N   SER  1043    -16.059 -16.739  31.532  1.00 24.41
ATOM   7062  CA  SER  1043    -16.809 -16.339  32.723  1.00 24.75
ATOM   7063  CB  SER  1043    -18.185 -15.799  32.326  1.00 26.59
ATOM   7064  OG  SER  1043    -18.069 -14.611  31.563  1.00 29.05
ATOM   7065  C   SER  1043    -16.981 -17.493  33.710  1.00 24.52
ATOM   7066  O   SER  1043    -17.845 -17.440  34.581  1.00 25.87
ATOM   7067  N   VAL  1044    -16.149 -18.524  33.578  1.00 23.32
ATOM   7068  CA  VAL  1044    -16.227 -19.695  34.454  1.00 22.51
ATOM   7069  CB  VAL  1044    -15.004 -20.632  34.249  1.00 23.18
ATOM   7070  CG1 VAL  1044    -13.718 -19.911  34.614  1.00 22.95
ATOM   7071  CG2 VAL  1044    -15.166 -21.895  35.084  1.00 22.94
ATOM   7072  C   VAL  1044    -16.338 -19.326  35.933  1.00 22.48
ATOM   7073  O   VAL  1044    -17.060 -19.982  36.682  1.00 23.24
ATOM   7074  N   ASN  1045    -15.626 -18.287  36.360  1.00 22.59
ATOM   7075  CA  ASN  1045    -15.685 -17.879  37.761  1.00 24.64
ATOM   7076  CB  ASN  1045    -14.546 -16.911  38.091  1.00 23.05
ATOM   7077  CG  ASN  1045    -13.187 -17.545  37.913  1.00 21.46
ATOM   7078  OD1 ASN  1045    -12.806 -18.447  38.666  1.00 20.69
ATOM   7079  ND2 ASN  1045    -12.453 -17.096  36.904  1.00 20.14
ATOM   7080  C   ASN  1045    -17.019 -17.237  38.107  1.00 25.96
ATOM   7081  O   ASN  1045    -17.458 -17.289  39.257  1.00 26.58
ATOM   7082  N   ILE  1046    -17.666 -16.633  37.115  1.00 28.57
ATOM   7083  CA  ILE  1046    -18.962 -15.997  37.342  1.00 30.78
ATOM   7084  CB  ILE  1046    -19.397 -15.116  36.141  1.00 30.35
ATOM   7085  CG2 ILE  1046    -20.822 -14.616  36.356  1.00 29.76
ATOM   7086  CG1 ILE  1046    -18.440 -13.933  35.970  1.00 29.93
ATOM   7087  CD1 ILE  1046    -18.419 -12.976  37.145  1.00 28.61
ATOM   7088  C   ILE  1046    -20.023 -17.067  37.551  1.00 32.86
ATOM   7089  O   ILE  1046    -20.841 -16.971  38.466  1.00 32.88
ATOM   7090  N   PHE  1047    -20.008 -18.084  36.693  1.00 35.65
ATOM   7091  CA  PHE  1047    -20.977 -19.174  36.783  1.00 39.34
ATOM   7092  CB  PHE  1047    -21.125 -19.878  35.430  1.00 40.96
ATOM   7093  CG  PHE  1047    -21.373 -18.946  34.277  1.00 43.16
ATOM   7094  CD1 PHE  1047    -22.418 -18.029  34.313  1.00 45.03
ATOM   7095  CD2 PHE  1047    -20.570 -19.003  33.141  1.00 44.64
ATOM   7096  CE1 PHE  1047    -22.660 -17.177  33.234  1.00 45.71
ATOM   7097  CE2 PHE  1047    -20.803 -18.157  32.057  1.00 45.87
ATOM   7098  CZ  PHE  1047    -21.851 -17.243  32.104  1.00 46.15
ATOM   7099  C   PHE  1047    -20.559 -20.204  37.829  1.00 40.40
ATOM   7100  O   PHE  1047    -21.384 -20.982  38.309  1.00 40.84
ATOM   7101  N   GLY  1048    -19.275 -20.208  38.174  1.00 40.74
ATOM   7102  CA  GLY  1048    -18.780 -21.157  39.153  1.00 41.82
ATOM   7103  C   GLY  1048    -18.688 -22.550  38.561  1.00 43.00
ATOM   7104  O   GLY  1048    -18.995 -23.546  39.220  1.00 42.75
ATOM   7105  N   GLY  1049    -18.262 -22.617  37.306  1.00 43.62
ATOM   7106  CA  GLY  1049    -18.140 -23.893  36.629  1.00 45.01
ATOM   7107  C   GLY  1049    -18.709 -23.799  35.229  1.00 46.15
ATOM   7108  O   GLY  1049    -19.129 -22.723  34.800  1.00 45.08
ATOM   7109  N   TYR  1050    -18.725 -24.919  34.513  1.00 47.77
ATOM   7110  CA  TYR  1050    -19.255 -24.940  33.156  1.00 49.51
ATOM   7111  CB  TYR  1050    -18.312 -25.707  32.227  1.00 49.59
ATOM   7112  CG  TYR  1050    -16.897 -25.181  32.246  1.00 49.48
```

```
ATOM   7113  CD1 TYR  1050    -15.963 -25.674  33.153  1.00 49.47
ATOM   7114  CE1 TYR  1050    -14.669 -25.170  33.196  1.00 50.01
ATOM   7115  CD2 TYR  1050    -16.499 -24.166  31.376  1.00 49.76
ATOM   7116  CE2 TYR  1050    -15.207 -23.652  31.411  1.00 49.86
ATOM   7117  CZ  TYR  1050    -14.298 -24.159  32.323  1.00 50.33
ATOM   7118  OH  TYR  1050    -13.019 -23.657  32.370  1.00 50.67
ATOM   7119  C   TYR  1050    -20.635 -25.576  33.136  1.00 50.55
ATOM   7120  O   TYR  1050    -20.778 -26.770  32.876  1.00 50.84
ATOM   7121  N   LYS  1051    -21.648 -24.760  33.412  1.00 51.54
ATOM   7122  CA  LYS  1051    -23.031 -25.218  33.444  1.00 52.63
ATOM   7123  CB  LYS  1051    -23.738 -24.620  34.662  1.00 53.67
ATOM   7124  CG  LYS  1051    -22.963 -24.790  35.960  1.00 55.80
ATOM   7125  CD  LYS  1051    -23.561 -23.961  37.087  1.00 56.82
ATOM   7126  CE  LYS  1051    -22.680 -24.006  38.328  1.00 57.73
ATOM   7127  NZ  LYS  1051    -23.192 -23.119  39.410  1.00 58.17
ATOM   7128  C   LYS  1051    -23.756 -24.804  32.165  1.00 52.42
ATOM   7129  O   LYS  1051    -23.359 -23.850  31.495  1.00 51.97
ATOM   7130  N   VAL  1052    -24.821 -25.526  31.832  1.00 52.32
ATOM   7131  CA  VAL  1052    -25.595 -25.237  30.632  1.00 52.55
ATOM   7132  CB  VAL  1052    -26.555 -26.397  30.299  1.00 51.86
ATOM   7133  CG1 VAL  1052    -27.330 -26.087  29.025  1.00 51.77
ATOM   7134  CG2 VAL  1052    -25.771 -27.688  30.147  1.00 51.56
ATOM   7135  C   VAL  1052    -26.414 -23.959  30.779  1.00 52.86
ATOM   7136  O   VAL  1052    -26.992 -23.698  31.834  1.00 52.72
ATOM   7137  N   GLN  1053    -26.449 -23.164  29.714  1.00 53.38
ATOM   7138  CA  GLN  1053    -27.207 -21.917  29.701  1.00 53.40
ATOM   7139  CB  GLN  1053    -26.328 -20.754  29.234  1.00 53.64
ATOM   7140  CG  GLN  1053    -25.598 -20.014  30.348  1.00 54.11
ATOM   7141  CD  GLN  1053    -24.605 -20.884  31.081  1.00 53.82
ATOM   7142  OE1 GLN  1053    -23.756 -21.525  30.465  1.00 55.31
ATOM   7143  NE2 GLN  1053    -24.697 -20.904  32.406  1.00 53.40
ATOM   7144  C   GLN  1053    -28.410 -22.044  28.773  1.00 53.18
ATOM   7145  O   GLN  1053    -28.560 -23.043  28.070  1.00 52.32
ATOM   7146  N   GLY  1054    -29.261 -21.024  28.773  1.00 53.68
ATOM   7147  CA  GLY  1054    -30.440 -21.045  27.927  1.00 54.63
ATOM   7148  C   GLY  1054    -31.592 -21.795  28.567  1.00 55.39
ATOM   7149  O   GLY  1054    -32.719 -21.745  28.080  1.00 55.28
ATOM   7150  N   ARG  1055    -31.303 -22.495  29.660  1.00 56.01
ATOM   7151  CA  ARG  1055    -32.314 -23.255  30.382  1.00 57.40
ATOM   7152  CB  ARG  1055    -31.674 -24.003  31.556  1.00 59.12
ATOM   7153  CG  ARG  1055    -30.714 -25.123  31.166  1.00 61.02
ATOM   7154  CD  ARG  1055    -31.455 -26.328  30.604  1.00 62.44
ATOM   7155  NE  ARG  1055    -30.566 -27.459  30.347  1.00 63.71
ATOM   7156  CZ  ARG  1055    -29.867 -28.095  31.284  1.00 64.04
ATOM   7157  NH1 ARG  1055    -29.949 -27.713  32.551  1.00 64.28
ATOM   7158  NH2 ARG  1055    -29.086 -29.117  30.955  1.00 64.25
ATOM   7159  C   ARG  1055    -33.403 -22.325  30.911  1.00 57.48
ATOM   7160  O   ARG  1055    -33.223 -21.667  31.936  1.00 57.81
ATOM   7161  N   GLY  1056    -34.530 -22.268  30.208  1.00 57.14
ATOM   7162  CA  GLY  1056    -35.619 -21.414  30.643  1.00 56.84
ATOM   7163  C   GLY  1056    -36.179 -20.523  29.552  1.00 56.31
ATOM   7164  O   GLY  1056    -35.678 -20.507  28.427  1.00 55.89
ATOM   7165  N   ASP  1057    -37.224 -19.778  29.894  1.00 56.37
ATOM   7166  CA  ASP  1057    -37.869 -18.874  28.951  1.00 56.25
ATOM   7167  CB  ASP  1057    -39.315 -18.615  29.382  1.00 57.60
ATOM   7168  CG  ASP  1057    -40.138 -19.886  29.450  1.00 58.32
ATOM   7169  OD1 ASP  1057    -40.329 -20.525  28.394  1.00 58.27
ATOM   7170  OD2 ASP  1057    -40.589 -20.248  30.560  1.00 58.42
ATOM   7171  C   ASP  1057    -37.116 -17.552  28.868  1.00 55.73
ATOM   7172  O   ASP  1057    -36.656 -17.154  27.797  1.00 55.55
ATOM   7173  N   GLU  1058    -36.990 -16.878  30.005  1.00 54.61
ATOM   7174  CA  GLU  1058    -36.295 -15.600  30.059  1.00 53.66
ATOM   7175  CB  GLU  1058    -36.187 -15.125  31.510  1.00 54.74
ATOM   7176  CG  GLU  1058    -35.451 -13.809  31.680  1.00 56.54
ATOM   7177  CD  GLU  1058    -35.511 -13.289  33.103  1.00 57.81
ATOM   7178  OE1 GLU  1058    -36.616 -12.929  33.560  1.00 58.07
ATOM   7179  OE2 GLU  1058    -34.453 -13.247  33.767  1.00 58.77
ATOM   7180  C   GLU  1058    -34.906 -15.700  29.436  1.00 52.45
ATOM   7181  O   GLU  1058    -34.577 -14.950  28.515  1.00 52.76
ATOM   7182  N   ALA  1059    -34.095 -16.628  29.937  1.00 50.76
ATOM   7183  CA  ALA  1059    -32.741 -16.820  29.420  1.00 48.43
ATOM   7184  CB  ALA  1059    -31.995 -17.834  30.277  1.00 48.71
ATOM   7185  C   ALA  1059    -32.790 -17.290  27.969  1.00 46.48
ATOM   7186  O   ALA  1059    -31.947 -16.913  27.153  1.00 46.02
ATOM   7187  N   GLY  1060    -33.783 -18.116  27.658  1.00 44.48
ATOM   7188  CA  GLY  1060    -33.931 -18.618  26.307  1.00 42.19
ATOM   7189  C   GLY  1060    -34.145 -17.491  25.315  1.00 41.58
```

```
ATOM    7190  O   GLY  1060     -33.539 -17.480  24.245  1.00 41.81
ATOM    7191  N   ASP  1061     -35.008 -16.540  25.667  1.00 40.06
ATOM    7192  CA  ASP  1061     -35.288 -15.401  24.797  1.00 38.77
ATOM    7193  CB  ASP  1061     -36.570 -14.686  25.236  1.00 39.86
ATOM    7194  CG  ASP  1061     -37.760 -15.616  25.318  1.00 39.94
ATOM    7195  OD1 ASP  1061     -38.037 -16.323  24.328  1.00 40.73
ATOM    7196  OD2 ASP  1061     -38.422 -15.634  26.375  1.00 41.22
ATOM    7197  C   ASP  1061     -34.131 -14.407  24.837  1.00 37.48
ATOM    7198  O   ASP  1061     -33.857 -13.719  23.854  1.00 37.88
ATOM    7199  N   GLN  1062     -33.464 -14.332  25.983  1.00 35.98
ATOM    7200  CA  GLN  1062     -32.337 -13.426  26.155  1.00 34.74
ATOM    7201  CB  GLN  1062     -31.807 -13.508  27.586  1.00 35.48
ATOM    7202  CG  GLN  1062     -30.679 -12.533  27.895  1.00 36.93
ATOM    7203  CD  GLN  1062     -31.115 -11.083  27.786  1.00 38.62
ATOM    7204  OE1 GLN  1062     -32.048 -10.653  28.465  1.00 38.65
ATOM    7205  NE2 GLN  1062     -30.439 -10.320  26.933  1.00 38.92
ATOM    7206  C   GLN  1062     -31.225 -13.777  25.173  1.00 33.19
ATOM    7207  O   GLN  1062     -30.671 -12.899  24.512  1.00 31.37
ATOM    7208  N   LEU  1063     -30.904 -15.064  25.082  1.00 32.49
ATOM    7209  CA  LEU  1063     -29.861 -15.531  24.176  1.00 31.76
ATOM    7210  CB  LEU  1063     -29.584 -17.025  24.405  1.00 32.31
ATOM    7211  CG  LEU  1063     -28.900 -17.413  25.721  1.00 33.38
ATOM    7212  CD1 LEU  1063     -28.693 -18.923  25.776  1.00 34.58
ATOM    7213  CD2 LEU  1063     -27.560 -16.701  25.837  1.00 33.59
ATOM    7214  C   LEU  1063     -30.243 -15.287  22.718  1.00 31.49
ATOM    7215  O   LEU  1063     -29.410 -14.874  21.910  1.00 29.46
ATOM    7216  N   LEU  1064     -31.504 -15.544  22.385  1.00 30.95
ATOM    7217  CA  LEU  1064     -31.984 -15.334  21.024  1.00 31.20
ATOM    7218  CB  LEU  1064     -33.442 -15.792  20.899  1.00 33.16
ATOM    7219  CG  LEU  1064     -34.097 -15.755  19.513  1.00 34.91
ATOM    7220  CD1 LEU  1064     -35.286 -16.709  19.482  1.00 35.64
ATOM    7221  CD2 LEU  1064     -34.536 -14.350  19.182  1.00 34.56
ATOM    7222  C   LEU  1064     -31.865 -13.850  20.696  1.00 29.59
ATOM    7223  O   LEU  1064     -31.476 -13.474  19.589  1.00 28.93
ATOM    7224  N   SER  1065     -32.191 -13.009  21.672  1.00 27.94
ATOM    7225  CA  SER  1065     -32.106 -11.572  21.475  1.00 27.91
ATOM    7226  CB  SER  1065     -32.645 -10.830  22.697  1.00 28.13
ATOM    7227  OG  SER  1065     -32.610  -9.429  22.483  1.00 30.15
ATOM    7228  C   SER  1065     -30.662 -11.156  21.219  1.00 26.39
ATOM    7229  O   SER  1065     -30.389 -10.386  20.300  1.00 26.00
ATOM    7230  N   ASP  1066     -29.741 -11.665  22.035  1.00 25.06
ATOM    7231  CA  ASP  1066     -28.320 -11.340  21.880  1.00 24.78
ATOM    7232  CB  ASP  1066     -27.491 -11.989  22.989  1.00 25.95
ATOM    7233  CG  ASP  1066     -27.730 -11.348  24.338  1.00 28.70
ATOM    7234  OD1 ASP  1066     -27.860 -10.107  24.385  1.00 30.67
ATOM    7235  OD2 ASP  1066     -27.775 -12.077  25.351  1.00 31.26
ATOM    7236  C   ASP  1066     -27.783 -11.782  20.524  1.00 23.52
ATOM    7237  O   ASP  1066     -26.968 -11.089  19.915  1.00 23.49
ATOM    7238  N   ALA  1067     -28.235 -12.945  20.062  1.00 23.51
ATOM    7239  CA  ALA  1067     -27.813 -13.478  18.776  1.00 22.29
ATOM    7240  CB  ALA  1067     -28.450 -14.842  18.547  1.00 22.43
ATOM    7241  C   ALA  1067     -28.216 -12.516  17.665  1.00 22.46
ATOM    7242  O   ALA  1067     -27.410 -12.164  16.804  1.00 20.38
ATOM    7243  N   LEU  1068     -29.472 -12.091  17.683  1.00 23.01
ATOM    7244  CA  LEU  1068     -29.961 -11.167  16.668  1.00 22.75
ATOM    7245  CB  LEU  1068     -31.464 -10.947  16.844  1.00 22.25
ATOM    7246  CG  LEU  1068     -32.364 -12.126  16.480  1.00 23.59
ATOM    7247  CD1 LEU  1068     -33.765 -11.876  17.028  1.00 25.32
ATOM    7248  CD2 LEU  1068     -32.399 -12.310  14.959  1.00 24.63
ATOM    7249  C   LEU  1068     -29.224  -9.838  16.784  1.00 20.46
ATOM    7250  O   LEU  1068     -28.926  -9.210  15.781  1.00 20.46
ATOM    7251  N   ALA  1069     -28.928  -9.436  18.016  1.00 20.31
ATOM    7252  CA  ALA  1069     -28.234  -8.186  18.284  1.00 20.51
ATOM    7253  CB  ALA  1069     -28.237  -7.899  19.783  1.00 21.24
ATOM    7254  C   ALA  1069     -26.803  -8.201  17.757  1.00 18.78
ATOM    7255  O   ALA  1069     -26.326  -7.211  17.203  1.00 17.76
ATOM    7256  N   LEU  1070     -26.117  -9.325  17.929  1.00 19.42
ATOM    7257  CA  LEU  1070     -24.745  -9.440  17.455  1.00 18.83
ATOM    7258  CB  LEU  1070     -24.092 -10.719  18.005  1.00 18.63
ATOM    7259  CG  LEU  1070     -23.813 -10.721  19.516  1.00 17.66
ATOM    7260  CD1 LEU  1070     -23.361 -12.111  19.965  1.00 17.08
ATOM    7261  CD2 LEU  1070     -22.750  -9.689  19.849  1.00 16.40
ATOM    7262  C   LEU  1070     -24.741  -9.435  15.930  1.00 18.26
ATOM    7263  O   LEU  1070     -23.897  -8.791  15.308  1.00 16.25
ATOM    7264  N   GLU  1071     -25.692 -10.141  15.327  1.00 19.53
ATOM    7265  CA  GLU  1071     -25.789 -10.178  13.872  1.00 19.82
ATOM    7266  CB  GLU  1071     -26.907 -11.137  13.445  1.00 22.79
```

```
ATOM   7267  CG   GLU  1071     -27.158 -11.196  11.944  1.00 23.57
ATOM   7268  CD   GLU  1071     -28.293 -12.133  11.587  1.00 25.87
ATOM   7269  OE1  GLU  1071     -29.412 -11.938  12.111  1.00 26.11
ATOM   7270  OE2  GLU  1071     -28.075 -13.063  10.783  1.00 27.62
ATOM   7271  C    GLU  1071     -26.069  -8.775  13.324  1.00 19.77
ATOM   7272  O    GLU  1071     -25.424  -8.339  12.374  1.00 17.58
ATOM   7273  N    ALA  1072     -27.028  -8.071  13.922  1.00 20.66
ATOM   7274  CA   ALA  1072     -27.368  -6.721  13.467  1.00 20.74
ATOM   7275  CB   ALA  1072     -28.569  -6.182  14.245  1.00 21.28
ATOM   7276  C    ALA  1072     -26.176  -5.786  13.630  1.00 22.41
ATOM   7277  O    ALA  1072     -26.034  -4.804  12.898  1.00 23.66
ATOM   7278  N    ALA  1073     -25.319  -6.099  14.598  1.00 22.57
ATOM   7279  CA   ALA  1073     -24.130  -5.295  14.856  1.00 19.20
ATOM   7280  CB   ALA  1073     -23.572  -5.616  16.241  1.00 20.25
ATOM   7281  C    ALA  1073     -23.058  -5.530  13.792  1.00 19.63
ATOM   7282  O    ALA  1073     -22.136  -4.730  13.647  1.00 19.20
ATOM   7283  N    GLY  1074     -23.168  -6.628  13.049  1.00 17.74
ATOM   7284  CA   GLY  1074     -22.175  -6.890  12.018  1.00 17.83
ATOM   7285  C    GLY  1074     -21.454  -8.225  12.112  1.00 17.24
ATOM   7286  O    GLY  1074     -20.632  -8.545  11.250  1.00 17.98
ATOM   7287  N    ALA  1075     -21.739  -9.005  13.149  1.00 17.76
ATOM   7288  CA   ALA  1075     -21.096 -10.310  13.286  1.00 17.79
ATOM   7289  CB   ALA  1075     -21.544 -10.994  14.581  1.00 16.20
ATOM   7290  C    ALA  1075     -21.479 -11.160  12.080  1.00 18.93
ATOM   7291  O    ALA  1075     -22.659 -11.237  11.709  1.00 18.99
ATOM   7292  N    GLN  1076     -20.478 -11.790  11.468  1.00 17.65
ATOM   7293  CA   GLN  1076     -20.685 -12.625  10.283  1.00 19.07
ATOM   7294  CB   GLN  1076     -19.575 -12.363   9.258  1.00 20.10
ATOM   7295  CG   GLN  1076     -19.644 -10.967   8.666  1.00 21.35
ATOM   7296  CD   GLN  1076     -18.519 -10.664   7.700  1.00 23.80
ATOM   7297  OE1  GLN  1076     -18.528 -11.110   6.547  1.00 28.97
ATOM   7298  NE2  GLN  1076     -17.540  -9.900   8.164  1.00 19.71
ATOM   7299  C    GLN  1076     -20.757 -14.110  10.604  1.00 18.87
ATOM   7300  O    GLN  1076     -21.044 -14.933   9.731  1.00 21.05
ATOM   7301  N    LEU  1077     -20.505 -14.435  11.867  1.00 19.04
ATOM   7302  CA   LEU  1077     -20.540 -15.804  12.361  1.00 18.01
ATOM   7303  CB   LEU  1077     -19.163 -16.467  12.210  1.00 21.10
ATOM   7304  CG   LEU  1077     -18.902 -17.310  10.966  1.00 22.57
ATOM   7305  CD1  LEU  1077     -17.468 -17.821  10.996  1.00 24.38
ATOM   7306  CD2  LEU  1077     -19.878 -18.477  10.920  1.00 23.84
ATOM   7307  C    LEU  1077     -20.925 -15.799  13.831  1.00 17.60
ATOM   7308  O    LEU  1077     -20.699 -14.816  14.536  1.00 17.24
ATOM   7309  N    LEU  1078     -21.514 -16.895  14.293  1.00 16.91
ATOM   7310  CA   LEU  1078     -21.898 -17.013  15.700  1.00 17.04
ATOM   7311  CB   LEU  1078     -23.371 -16.631  15.904  1.00 18.53
ATOM   7312  CG   LEU  1078     -23.888 -16.847  17.336  1.00 19.84
ATOM   7313  CD1  LEU  1078     -23.257 -15.825  18.288  1.00 19.36
ATOM   7314  CD2  LEU  1078     -25.401 -16.719  17.362  1.00 20.91
ATOM   7315  C    LEU  1078     -21.695 -18.434  16.206  1.00 17.33
ATOM   7316  O    LEU  1078     -22.124 -19.395  15.563  1.00 18.22
ATOM   7317  N    VAL  1079     -21.037 -18.555  17.357  1.00 16.40
ATOM   7318  CA   VAL  1079     -20.806 -19.847  17.999  1.00 15.90
ATOM   7319  CB   VAL  1079     -19.364 -19.972  18.562  1.00 16.02
ATOM   7320  CG1  VAL  1079     -19.271 -21.169  19.519  1.00 15.56
ATOM   7321  CG2  VAL  1079     -18.376 -20.161  17.418  1.00 11.83
ATOM   7322  C    VAL  1079     -21.780 -19.977  19.163  1.00 18.15
ATOM   7323  O    VAL  1079     -21.915 -19.056  19.971  1.00 20.36
ATOM   7324  N    LEU  1080     -22.467 -21.113  19.225  1.00 20.11
ATOM   7325  CA   LEU  1080     -23.420 -21.401  20.296  1.00 20.37
ATOM   7326  CB   LEU  1080     -24.792 -21.775  19.730  1.00 21.80
ATOM   7327  CG   LEU  1080     -25.778 -20.659  19.401  1.00 24.35
ATOM   7328  CD1  LEU  1080     -27.092 -21.278  18.936  1.00 22.66
ATOM   7329  CD2  LEU  1080     -26.010 -19.794  20.637  1.00 23.99
ATOM   7330  C    LEU  1080     -22.876 -22.584  21.085  1.00 19.26
ATOM   7331  O    LEU  1080     -22.673 -23.659  20.526  1.00 18.71
ATOM   7332  N    GLU  1081     -22.656 -22.387  22.379  1.00 20.64
ATOM   7333  CA   GLU  1081     -22.110 -23.439  23.224  1.00 21.53
ATOM   7334  CB   GLU  1081     -20.760 -22.988  23.790  1.00 21.79
ATOM   7335  CG   GLU  1081     -20.131 -23.952  24.779  1.00 21.93
ATOM   7336  CD   GLU  1081     -18.676 -23.627  25.073  1.00 25.66
ATOM   7337  OE1  GLU  1081     -18.223 -22.519  24.712  1.00 24.72
ATOM   7338  OE2  GLU  1081     -17.989 -24.481  25.673  1.00 25.08
ATOM   7339  C    GLU  1081     -23.018 -23.897  24.364  1.00 22.06
ATOM   7340  O    GLU  1081     -23.556 -23.083  25.118  1.00 21.49
ATOM   7341  N    CYS  1082     -23.166 -25.215  24.471  1.00 23.09
ATOM   7342  CA   CYS  1082     -23.970 -25.861  25.503  1.00 23.95
ATOM   7343  CB   CYS  1082     -23.146 -26.008  26.776  1.00 25.09
```

```
ATOM    7344  SG  CYS  1082    -21.655 -26.980  26.505  1.00 27.14
ATOM    7345  C   CYS  1082    -25.276 -25.148  25.800  1.00 25.48
ATOM    7346  O   CYS  1082    -25.409 -24.431  26.795  1.00 25.29
ATOM    7347  N   VAL  1083    -26.238 -25.372  24.915  1.00 26.92
ATOM    7348  CA  VAL  1083    -27.561 -24.784  25.012  1.00 29.17
ATOM    7349  CB  VAL  1083    -27.646 -23.516  24.129  1.00 28.96
ATOM    7350  CG1 VAL  1083    -27.611 -23.900  22.655  1.00 30.28
ATOM    7351  CG2 VAL  1083    -28.898 -22.729  24.450  1.00 32.97
ATOM    7352  C   VAL  1083    -28.559 -25.830  24.508  1.00 29.38
ATOM    7353  O   VAL  1083    -28.276 -26.570  23.559  1.00 28.35
ATOM    7354  N   PRO  1084    -29.740 -25.911  25.138  1.00 30.34
ATOM    7355  CD  PRO  1084    -30.314 -25.021  26.160  1.00 29.84
ATOM    7356  CA  PRO  1084    -30.728 -26.896  24.688  1.00 30.70
ATOM    7357  CB  PRO  1084    -31.989 -26.510  25.471  1.00 30.48
ATOM    7358  CG  PRO  1084    -31.775 -25.059  25.807  1.00 31.98
ATOM    7359  C   PRO  1084    -30.928 -26.865  23.176  1.00 31.50
ATOM    7360  O   PRO  1084    -31.018 -25.794  22.572  1.00 32.64
ATOM    7361  N   VAL  1085    -30.983 -28.049  22.574  1.00 32.04
ATOM    7362  CA  VAL  1085    -31.157 -28.185  21.134  1.00 32.80
ATOM    7363  CB  VAL  1085    -31.465 -29.648  20.748  1.00 33.17
ATOM    7364  CG1 VAL  1085    -31.544 -29.780  19.239  1.00 32.51
ATOM    7365  CG2 VAL  1085    -30.392 -30.573  21.309  1.00 32.67
ATOM    7366  C   VAL  1085    -32.291 -27.305  20.632  1.00 34.32
ATOM    7367  O   VAL  1085    -32.224 -26.755  19.530  1.00 33.11
ATOM    7368  N   GLU  1086    -33.325 -27.176  21.457  1.00 36.11
ATOM    7369  CA  GLU  1086    -34.500 -26.371  21.131  1.00 38.46
ATOM    7370  CB  GLU  1086    -35.479 -26.364  22.313  1.00 40.09
ATOM    7371  CG  GLU  1086    -35.428 -27.605  23.195  1.00 42.70
ATOM    7372  CD  GLU  1086    -35.496 -28.894  22.402  1.00 44.30
ATOM    7373  OE1 GLU  1086    -36.420 -29.040  21.573  1.00 45.21
ATOM    7374  OE2 GLU  1086    -34.626 -29.764  22.614  1.00 45.27
ATOM    7375  C   GLU  1086    -34.097 -24.935  20.812  1.00 37.16
ATOM    7376  O   GLU  1086    -34.441 -24.400  19.758  1.00 37.62
ATOM    7377  N   LEU  1087    -33.370 -24.316  21.736  1.00 37.02
ATOM    7378  CA  LEU  1087    -32.928 -22.941  21.562  1.00 36.84
ATOM    7379  CB  LEU  1087    -32.192 -22.455  22.813  1.00 38.04
ATOM    7380  CG  LEU  1087    -32.583 -21.085  23.384  1.00 39.52
ATOM    7381  CD1 LEU  1087    -31.751 -20.804  24.630  1.00 40.56
ATOM    7382  CD2 LEU  1087    -32.378 -19.994  22.349  1.00 39.60
ATOM    7383  C   LEU  1087    -32.020 -22.817  20.345  1.00 36.08
ATOM    7384  O   LEU  1087    -32.141 -21.870  19.570  1.00 35.75
ATOM    7385  N   ALA  1088    -31.116 -23.778  20.173  1.00 35.37
ATOM    7386  CA  ALA  1088    -30.195 -23.757  19.038  1.00 34.84
ATOM    7387  CB  ALA  1088    -29.294 -24.989  19.066  1.00 32.98
ATOM    7388  C   ALA  1088    -30.965 -23.700  17.722  1.00 35.07
ATOM    7389  O   ALA  1088    -30.530 -23.059  16.765  1.00 35.13
ATOM    7390  N   LYS  1089    -32.112 -24.372  17.685  1.00 36.00
ATOM    7391  CA  LYS  1089    -32.952 -24.402  16.493  1.00 37.51
ATOM    7392  CB  LYS  1089    -34.133 -25.353  16.702  1.00 40.32
ATOM    7393  CG  LYS  1089    -33.741 -26.772  17.054  1.00 42.81
ATOM    7394  CD  LYS  1089    -34.966 -27.619  17.354  1.00 46.04
ATOM    7395  CE  LYS  1089    -34.575 -29.010  17.818  1.00 46.35
ATOM    7396  NZ  LYS  1089    -35.755 -29.769  18.300  1.00 47.78
ATOM    7397  C   LYS  1089    -33.485 -23.014  16.161  1.00 35.60
ATOM    7398  O   LYS  1089    -33.330 -22.536  15.039  1.00 35.12
ATOM    7399  N   ARG  1090    -34.117 -22.374  17.141  1.00 35.99
ATOM    7400  CA  ARG  1090    -34.681 -21.039  16.947  1.00 36.46
ATOM    7401  CB  ARG  1090    -35.288 -20.511  18.247  1.00 38.53
ATOM    7402  CG  ARG  1090    -36.350 -21.392  18.862  1.00 42.68
ATOM    7403  CD  ARG  1090    -37.186 -20.592  19.842  1.00 45.65
ATOM    7404  NE  ARG  1090    -36.365 -19.905  20.834  1.00 49.18
ATOM    7405  CZ  ARG  1090    -36.842 -19.046  21.730  1.00 50.27
ATOM    7406  NH1 ARG  1090    -38.137 -18.769  21.758  1.00 51.07
ATOM    7407  NH2 ARG  1090    -36.029 -18.464  22.601  1.00 51.07
ATOM    7408  C   ARG  1090    -33.639 -20.038  16.458  1.00 34.36
ATOM    7409  O   ARG  1090    -33.859 -19.334  15.472  1.00 34.30
ATOM    7410  N   ILE  1091    -32.513 -19.976  17.163  1.00 32.94
ATOM    7411  CA  ILE  1091    -31.432 -19.059  16.820  1.00 30.49
ATOM    7412  CB  ILE  1091    -30.265 -19.179  17.828  1.00 29.84
ATOM    7413  CG2 ILE  1091    -29.087 -18.304  17.382  1.00 26.75
ATOM    7414  CG1 ILE  1091    -30.749 -18.770  19.222  1.00 27.82
ATOM    7415  CD1 ILE  1091    -29.749 -19.036  20.332  1.00 28.01
ATOM    7416  C   ILE  1091    -30.904 -19.311  15.418  1.00 29.96
ATOM    7417  O   ILE  1091    -30.686 -18.374  14.650  1.00 30.26
ATOM    7418  N   THR  1092    -30.711 -20.580  15.078  1.00 30.58
ATOM    7419  CA  THR  1092    -30.193 -20.929  13.760  1.00 31.05
ATOM    7420  CB  THR  1092    -29.921 -22.433  13.645  1.00 31.25
```

```
ATOM   7421  OG1 THR  1092    -28.972 -22.827  14.648  1.00 31.53
ATOM   7422  CG2 THR  1092    -29.357 -22.760  12.269  1.00 29.03
ATOM   7423  C   THR  1092    -31.156 -20.527  12.654  1.00 31.78
ATOM   7424  O   THR  1092    -30.742 -20.039  11.602  1.00 32.76
ATOM   7425  N   GLU  1093    -32.443 -20.742  12.897  1.00 32.97
ATOM   7426  CA  GLU  1093    -33.467 -20.405  11.918  1.00 34.29
ATOM   7427  CB  GLU  1093    -34.743 -21.190  12.215  1.00 35.93
ATOM   7428  CG  GLU  1093    -34.531 -22.694  12.240  1.00 40.74
ATOM   7429  CD  GLU  1093    -35.785 -23.460  12.620  1.00 44.39
ATOM   7430  OE1 GLU  1093    -36.357 -23.178  13.698  1.00 46.36
ATOM   7431  OE2 GLU  1093    -36.193 -24.347  11.842  1.00 45.61
ATOM   7432  C   GLU  1093    -33.760 -18.909  11.913  1.00 32.84
ATOM   7433  O   GLU  1093    -34.238 -18.366  10.915  1.00 33.67
ATOM   7434  N   ALA  1094    -33.461 -18.244  13.024  1.00 32.28
ATOM   7435  CA  ALA  1094    -33.705 -16.810  13.138  1.00 30.66
ATOM   7436  CB  ALA  1094    -33.876 -16.430  14.602  1.00 31.86
ATOM   7437  C   ALA  1094    -32.604 -15.965  12.503  1.00 29.98
ATOM   7438  O   ALA  1094    -32.881 -14.912  11.927  1.00 29.52
ATOM   7439  N   LEU  1095    -31.358 -16.424  12.602  1.00 27.75
ATOM   7440  CA  LEU  1095    -30.240 -15.677  12.035  1.00 26.60
ATOM   7441  CB  LEU  1095    -28.973 -15.892  12.875  1.00 27.24
ATOM   7442  CG  LEU  1095    -28.992 -15.409  14.327  1.00 28.91
ATOM   7443  CD1 LEU  1095    -27.602 -15.587  14.941  1.00 28.85
ATOM   7444  CD2 LEU  1095    -29.400 -13.948  14.386  1.00 32.53
ATOM   7445  C   LEU  1095    -29.940 -16.024  10.581  1.00 25.13
ATOM   7446  O   LEU  1095    -30.069 -17.176  10.161  1.00 25.13
ATOM   7447  N   ALA  1096    -29.544 -15.016   9.813  1.00 23.38
ATOM   7448  CA  ALA  1096    -29.194 -15.221   8.417  1.00 24.18
ATOM   7449  CB  ALA  1096    -29.358 -13.921   7.636  1.00 26.66
ATOM   7450  C   ALA  1096    -27.742 -15.704   8.340  1.00 23.29
ATOM   7451  O   ALA  1096    -27.383 -16.473   7.446  1.00 22.71
ATOM   7452  N   ILE  1097    -26.910 -15.253   9.278  1.00 22.57
ATOM   7453  CA  ILE  1097    -25.507 -15.662   9.295  1.00 22.02
ATOM   7454  CB  ILE  1097    -24.638 -14.773  10.231  1.00 20.30
ATOM   7455  CG2 ILE  1097    -24.637 -13.339   9.735  1.00 18.65
ATOM   7456  CG1 ILE  1097    -25.141 -14.868  11.671  1.00 19.11
ATOM   7457  CD1 ILE  1097    -24.232 -14.180  12.681  1.00 16.71
ATOM   7458  C   ILE  1097    -25.392 -17.099   9.779  1.00 21.40
ATOM   7459  O   ILE  1097    -26.266 -17.594  10.489  1.00 20.96
ATOM   7460  N   PRO  1098    -24.313 -17.793   9.391  1.00 21.86
ATOM   7461  CD  PRO  1098    -23.284 -17.422   8.409  1.00 22.08
ATOM   7462  CA  PRO  1098    -24.157 -19.180   9.832  1.00 22.32
ATOM   7463  CB  PRO  1098    -23.004 -19.700   8.968  1.00 21.93
ATOM   7464  CG  PRO  1098    -22.236 -18.469   8.626  1.00 24.68
ATOM   7465  C   PRO  1098    -23.896 -19.316  11.329  1.00 22.49
ATOM   7466  O   PRO  1098    -23.160 -18.528  11.933  1.00 21.97
ATOM   7467  N   VAL  1099    -24.527 -20.317  11.930  1.00 21.40
ATOM   7468  CA  VAL  1099    -24.368 -20.569  13.351  1.00 20.38
ATOM   7469  CB  VAL  1099    -25.735 -20.667  14.048  1.00 21.59
ATOM   7470  CG1 VAL  1099    -25.543 -21.007  15.518  1.00 20.95
ATOM   7471  CG2 VAL  1099    -26.485 -19.348  13.902  1.00 20.13
ATOM   7472  C   VAL  1099    -23.593 -21.862  13.568  1.00 20.91
ATOM   7473  O   VAL  1099    -24.009 -22.929  13.119  1.00 21.10
ATOM   7474  N   ILE  1100    -22.459 -21.749  14.252  1.00 20.43
ATOM   7475  CA  ILE  1100    -21.606 -22.897  14.553  1.00 19.39
ATOM   7476  CB  ILE  1100    -20.106 -22.533  14.393  1.00 18.61
ATOM   7477  CG2 ILE  1100    -19.235 -23.709  14.814  1.00 21.73
ATOM   7478  CG1 ILE  1100    -19.807 -22.154  12.939  1.00 19.30
ATOM   7479  CD1 ILE  1100    -18.369 -21.678  12.698  1.00 18.01
ATOM   7480  C   ILE  1100    -21.862 -23.344  15.992  1.00 17.92
ATOM   7481  O   ILE  1100    -21.811 -22.541  16.925  1.00 19.15
ATOM   7482  N   GLY  1101    -22.126 -24.629  16.179  1.00 17.28
ATOM   7483  CA  GLY  1101    -22.392 -25.087  17.521  1.00 15.61
ATOM   7484  C   GLY  1101    -21.405 -26.058  18.134  1.00 16.33
ATOM   7485  O   GLY  1101    -20.607 -26.692  17.449  1.00 14.73
ATOM   7486  N   ILE  1102    -21.450 -26.126  19.457  1.00 16.82
ATOM   7487  CA  ILE  1102    -20.642 -27.055  20.228  1.00 17.43
ATOM   7488  CB  ILE  1102    -19.213 -26.493  20.587  1.00 15.75
ATOM   7489  CG2 ILE  1102    -19.297 -25.103  21.214  1.00 16.29
ATOM   7490  CG1 ILE  1102    -18.514 -27.477  21.519  1.00 17.38
ATOM   7491  CD1 ILE  1102    -17.048 -27.149  21.769  1.00 17.39
ATOM   7492  C   ILE  1102    -21.486 -27.320  21.466  1.00 16.49
ATOM   7493  O   ILE  1102    -21.652 -26.457  22.324  1.00 18.86
ATOM   7494  N   GLY  1103    -22.064 -28.515  21.525  1.00 18.98
ATOM   7495  CA  GLY  1103    -22.913 -28.857  22.649  1.00 19.60
ATOM   7496  C   GLY  1103    -24.275 -28.209  22.470  1.00 21.48
ATOM   7497  O   GLY  1103    -24.969 -27.921  23.443  1.00 22.27
```

```
ATOM    7498  N   ALA  1104    -24.652 -27.972  21.217  1.00 22.82
ATOM    7499  CA  ALA  1104    -25.935 -27.353  20.908  1.00 25.45
ATOM    7500  CB  ALA  1104    -25.716 -25.988  20.259  1.00 25.68
ATOM    7501  C   ALA  1104    -26.771 -28.236  19.987  1.00 25.66
ATOM    7502  O   ALA  1104    -27.830 -27.820  19.515  1.00 26.77
ATOM    7503  N   GLY  1105    -26.293 -29.448  19.722  1.00 26.62
ATOM    7504  CA  GLY  1105    -27.026 -30.351  18.852  1.00 26.39
ATOM    7505  C   GLY  1105    -26.597 -30.240  17.400  1.00 26.35
ATOM    7506  O   GLY  1105    -25.665 -29.504  17.087  1.00 27.27
ATOM    7507  N   ASN  1106    -27.276 -30.966  16.514  1.00 24.67
ATOM    7508  CA  ASN  1106    -26.946 -30.947  15.095  1.00 25.28
ATOM    7509  CB  ASN  1106    -27.003 -32.363  14.513  1.00 27.03
ATOM    7510  CG  ASN  1106    -28.406 -32.957  14.543  1.00 28.79
ATOM    7511  OD1 ASN  1106    -28.706 -33.901  13.810  1.00 30.36
ATOM    7512  ND2 ASN  1106    -29.267 -32.414  15.398  1.00 26.73
ATOM    7513  C   ASN  1106    -27.851 -30.036  14.273  1.00 25.16
ATOM    7514  O   ASN  1106    -27.889 -30.133  13.046  1.00 26.21
ATOM    7515  N   VAL  1107    -28.563 -29.143  14.949  1.00 26.94
ATOM    7516  CA  VAL  1107    -29.476 -28.217  14.287  1.00 27.66
ATOM    7517  CB  VAL  1107    -30.583 -27.753  15.255  1.00 29.34
ATOM    7518  CG1 VAL  1107    -31.608 -26.904  14.507  1.00 33.27
ATOM    7519  CG2 VAL  1107    -31.250 -28.962  15.898  1.00 30.08
ATOM    7520  C   VAL  1107    -28.751 -26.984  13.761  1.00 27.29
ATOM    7521  O   VAL  1107    -29.274 -26.255  12.915  1.00 26.10
ATOM    7522  N   THR  1108    -27.547 -26.746  14.267  1.00 24.64
ATOM    7523  CA  THR  1108    -26.769 -25.592  13.840  1.00 22.37
ATOM    7524  CB  THR  1108    -25.594 -25.337  14.805  1.00 21.49
ATOM    7525  OG1 THR  1108    -24.814 -26.532  14.944  1.00 20.03
ATOM    7526  CG2 THR  1108    -26.116 -24.918  16.171  1.00 20.67
ATOM    7527  C   THR  1108    -26.242 -25.787  12.424  1.00 22.32
ATOM    7528  O   THR  1108    -26.276 -26.891  11.888  1.00 23.83
ATOM    7529  N   ASP  1109    -25.764 -24.705  11.820  1.00 21.15
ATOM    7530  CA  ASP  1109    -25.241 -24.746  10.461  1.00 21.07
ATOM    7531  CB  ASP  1109    -25.122 -23.326   9.918  1.00 22.92
ATOM    7532  CG  ASP  1109    -26.450 -22.605   9.904  1.00 25.19
ATOM    7533  OD1 ASP  1109    -27.371 -23.091   9.220  1.00 22.36
ATOM    7534  OD2 ASP  1109    -26.577 -21.565  10.589  1.00 26.54
ATOM    7535  C   ASP  1109    -23.889 -25.432  10.389  1.00 20.97
ATOM    7536  O   ASP  1109    -23.511 -25.975   9.353  1.00 20.53
ATOM    7537  N   GLY  1110    -23.161 -25.396  11.498  1.00 21.29
ATOM    7538  CA  GLY  1110    -21.855 -26.020  11.541  1.00 19.83
ATOM    7539  C   GLY  1110    -21.532 -26.555  12.920  1.00 18.45
ATOM    7540  O   GLY  1110    -22.321 -26.421  13.856  1.00 16.61
ATOM    7541  N   GLN  1111    -20.360 -27.169  13.046  1.00 18.75
ATOM    7542  CA  GLN  1111    -19.920 -27.725  14.315  1.00 18.97
ATOM    7543  CB  GLN  1111    -20.030 -29.253  14.300  1.00 20.40
ATOM    7544  CG  GLN  1111    -21.434 -29.822  14.149  1.00 21.52
ATOM    7545  CD  GLN  1111    -22.353 -29.426  15.281  1.00 22.47
ATOM    7546  OE1 GLN  1111    -21.950 -29.393  16.448  1.00 25.39
ATOM    7547  NE2 GLN  1111    -23.607 -29.136  14.946  1.00 23.89
ATOM    7548  C   GLN  1111    -18.462 -27.364  14.596  1.00 17.61
ATOM    7549  O   GLN  1111    -17.697 -27.072  13.679  1.00 16.60
ATOM    7550  N   ILE  1112    -18.089 -27.389  15.871  1.00 17.79
ATOM    7551  CA  ILE  1112    -16.716 -27.131  16.276  1.00 18.54
ATOM    7552  CB  ILE  1112    -16.454 -25.623  16.531  1.00 18.72
ATOM    7553  CG2 ILE  1112    -17.191 -25.146  17.786  1.00 18.50
ATOM    7554  CG1 ILE  1112    -14.945 -25.390  16.671  1.00 18.93
ATOM    7555  CD1 ILE  1112    -14.535 -23.906  16.715  1.00 20.59
ATOM    7556  C   ILE  1112    -16.417 -27.941  17.540  1.00 21.11
ATOM    7557  O   ILE  1112    -17.319 -28.264  18.321  1.00 20.41
ATOM    7558  N   LEU  1113    -15.148 -28.288  17.720  1.00 22.35
ATOM    7559  CA  LEU  1113    -14.726 -29.054  18.880  1.00 23.98
ATOM    7560  CB  LEU  1113    -15.130 -30.515  18.700  1.00 28.74
ATOM    7561  CG  LEU  1113    -15.427 -31.304  19.980  1.00 32.72
ATOM    7562  CD1 LEU  1113    -16.778 -30.878  20.556  1.00 32.53
ATOM    7563  CD2 LEU  1113    -15.441 -32.784  19.648  1.00 35.33
ATOM    7564  C   LEU  1113    -13.212 -28.947  18.990  1.00 23.34
ATOM    7565  O   LEU  1113    -12.534 -28.716  17.983  1.00 22.61
ATOM    7566  N   VAL  1114    -12.687 -29.104  20.205  1.00 21.36
ATOM    7567  CA  VAL  1114    -11.246 -29.044  20.440  1.00 19.62
ATOM    7568  CB  VAL  1114    -10.928 -28.996  21.966  1.00 20.48
ATOM    7569  CG1 VAL  1114     -9.434 -28.834  22.187  1.00 20.97
ATOM    7570  CG2 VAL  1114    -11.702 -27.870  22.620  1.00 20.82
ATOM    7571  C   VAL  1114    -10.628 -30.304  19.851  1.00 18.23
ATOM    7572  O   VAL  1114    -11.017 -31.419  20.210  1.00 18.70
ATOM    7573  N   MET  1115     -9.676 -30.137  18.943  1.00 16.13
ATOM    7574  CA  MET  1115     -9.041 -31.287  18.305  1.00 14.70
```

```
ATOM   7575  CB  MET  1115      -7.900 -30.830  17.390  1.00 14.14
ATOM   7576  CG  MET  1115      -6.823 -30.025  18.095  1.00 15.65
ATOM   7577  SD  MET  1115      -5.242 -30.356  17.297  1.00 13.45
ATOM   7578  CE  MET  1115      -4.722 -31.861  18.197  1.00 11.23
ATOM   7579  C   MET  1115      -8.492 -32.315  19.287  1.00 13.25
ATOM   7580  O   MET  1115      -8.533 -33.510  19.019  1.00 16.95
ATOM   7581  N   HIS  1116      -7.969 -31.866  20.421  1.00 12.84
ATOM   7582  CA  HIS  1116      -7.414 -32.828  21.377  1.00 14.12
ATOM   7583  CB  HIS  1116      -6.724 -32.107  22.521  1.00 13.42
ATOM   7584  CG  HIS  1116      -5.516 -31.336  22.084  1.00 14.34
ATOM   7585  CD2 HIS  1116      -5.403 -30.121  21.494  1.00 12.56
ATOM   7586  ND1 HIS  1116      -4.237 -31.839  22.165  1.00 14.51
ATOM   7587  CE1 HIS  1116      -3.384 -30.971  21.646  1.00 12.60
ATOM   7588  NE2 HIS  1116      -4.067 -29.919  21.230  1.00 19.44
ATOM   7589  C   HIS  1116      -8.476 -33.784  21.920  1.00 14.04
ATOM   7590  O   HIS  1116      -8.168 -34.939  22.232  1.00 16.57
ATOM   7591  N   ASP  1117      -9.717 -33.318  22.041  1.00 12.82
ATOM   7592  CA  ASP  1117     -10.794 -34.176  22.536  1.00 15.57
ATOM   7593  CB  ASP  1117     -12.014 -33.359  22.984  1.00 15.67
ATOM   7594  CG  ASP  1117     -11.741 -32.484  24.179  1.00 15.82
ATOM   7595  OD1 ASP  1117     -10.803 -32.772  24.947  1.00 15.40
ATOM   7596  OD2 ASP  1117     -12.486 -31.500  24.364  1.00 16.01
ATOM   7597  C   ASP  1117     -11.256 -35.108  21.424  1.00 17.95
ATOM   7598  O   ASP  1117     -11.438 -36.306  21.633  1.00 18.83
ATOM   7599  N   ALA  1118     -11.442 -34.533  20.237  1.00 18.76
ATOM   7600  CA  ALA  1118     -11.927 -35.267  19.073  1.00 20.93
ATOM   7601  CB  ALA  1118     -12.291 -34.286  17.965  1.00 21.95
ATOM   7602  C   ALA  1118     -10.983 -36.323  18.525  1.00 22.38
ATOM   7603  O   ALA  1118     -11.420 -37.225  17.815  1.00 23.45
ATOM   7604  N   PHE  1119      -9.698 -36.218  18.846  1.00 23.93
ATOM   7605  CA  PHE  1119      -8.739 -37.179  18.340  1.00 27.36
ATOM   7606  CB  PHE  1119      -7.670 -36.470  17.521  1.00 32.16
ATOM   7607  CG  PHE  1119      -8.223 -35.714  16.375  1.00 35.71
ATOM   7608  CD1 PHE  1119      -9.075 -36.337  15.474  1.00 37.69
ATOM   7609  CD2 PHE  1119      -7.922 -34.371  16.203  1.00 38.44
ATOM   7610  CE1 PHE  1119      -9.620 -35.633  14.420  1.00 40.51
ATOM   7611  CE2 PHE  1119      -8.463 -33.660  15.152  1.00 39.76
ATOM   7612  CZ  PHE  1119      -9.314 -34.287  14.256  1.00 41.23
ATOM   7613  C   PHE  1119      -8.086 -38.050  19.379  1.00 26.58
ATOM   7614  O   PHE  1119      -6.942 -38.460  19.212  1.00 30.89
ATOM   7615  N   GLY  1120      -8.817 -38.318  20.454  1.00 24.48
ATOM   7616  CA  GLY  1120      -8.327 -39.186  21.505  1.00 24.13
ATOM   7617  C   GLY  1120      -7.005 -38.851  22.160  1.00 23.63
ATOM   7618  O   GLY  1120      -6.283 -39.758  22.581  1.00 22.16
ATOM   7619  N   ILE  1121      -6.680 -37.565  22.252  1.00 20.46
ATOM   7620  CA  ILE  1121      -5.441 -37.145  22.900  1.00 19.00
ATOM   7621  CB  ILE  1121      -4.836 -35.889  22.225  1.00 16.75
ATOM   7622  CG2 ILE  1121      -3.614 -35.423  22.995  1.00 16.32
ATOM   7623  CG1 ILE  1121      -4.456 -36.203  20.777  1.00 15.62
ATOM   7624  CD1 ILE  1121      -4.238 -34.960  19.921  1.00 14.00
ATOM   7625  C   ILE  1121      -5.758 -36.832  24.359  1.00 19.57
ATOM   7626  O   ILE  1121      -5.100 -37.335  25.265  1.00 17.67
ATOM   7627  N   THR  1122      -6.774 -36.009  24.591  1.00 20.23
ATOM   7628  CA  THR  1122      -7.148 -35.671  25.958  1.00 23.81
ATOM   7629  CB  THR  1122      -8.387 -34.773  25.979  1.00 24.49
ATOM   7630  OG1 THR  1122      -9.425 -35.373  25.195  1.00 28.23
ATOM   7631  CG2 THR  1122      -8.053 -33.409  25.402  1.00 18.95
ATOM   7632  C   THR  1122      -7.443 -36.940  26.751  1.00 26.71
ATOM   7633  O   THR  1122      -8.052 -37.872  26.228  1.00 26.64
ATOM   7634  N   GLY  1123      -7.002 -36.962  28.005  1.00 30.43
ATOM   7635  CA  GLY  1123      -7.207 -38.113  28.870  1.00 37.27
ATOM   7636  C   GLY  1123      -8.332 -39.059  28.484  1.00 39.65
ATOM   7637  O   GLY  1123      -8.205 -39.847  27.544  1.00 41.64
ATOM   7638  N   GLY  1124      -9.441 -38.986  29.211  1.00 40.46
ATOM   7639  CA  GLY  1124     -10.569 -39.852  28.920  1.00 38.97
ATOM   7640  C   GLY  1124     -11.873 -39.208  29.340  1.00 37.18
ATOM   7641  O   GLY  1124     -12.953 -39.759  29.128  1.00 38.03
ATOM   7642  N   HIS  1125     -11.763 -38.026  29.932  1.00 36.46
ATOM   7643  CA  HIS  1125     -12.924 -37.290  30.399  1.00 35.97
ATOM   7644  CB  HIS  1125     -12.653 -36.726  31.792  1.00 37.38
ATOM   7645  CG  HIS  1125     -12.325 -37.771  32.812  1.00 39.81
ATOM   7646  CD2 HIS  1125     -11.211 -37.973  33.554  1.00 40.42
ATOM   7647  ND1 HIS  1125     -13.207 -38.769  33.164  1.00 40.29
ATOM   7648  CE1 HIS  1125     -12.651 -39.541  34.081  1.00 40.40
ATOM   7649  NE2 HIS  1125     -11.440 -39.080  34.335  1.00 41.75
ATOM   7650  C   HIS  1125     -13.291 -36.152  29.456  1.00 34.78
ATOM   7651  O   HIS  1125     -13.410 -35.000  29.880  1.00 36.44
```

```
ATOM   7652  N    ILE  1126    -13.466 -36.466  28.178  1.00 31.25
ATOM   7653  CA   ILE  1126    -13.835 -35.435  27.215  1.00 28.48
ATOM   7654  CB   ILE  1126    -13.804 -35.963  25.767  1.00 26.91
ATOM   7655  CG2  ILE  1126    -12.394 -36.360  25.388  1.00 26.98
ATOM   7656  CG1  ILE  1126    -14.768 -37.138  25.614  1.00 25.19
ATOM   7657  CD1  ILE  1126    -14.926 -37.612  24.194  1.00 22.08
ATOM   7658  C    ILE  1126    -15.249 -34.961  27.540  1.00 28.29
ATOM   7659  O    ILE  1126    -16.044 -35.702  28.122  1.00 27.48
ATOM   7660  N    PRO  1127    -15.586 -33.719  27.168  1.00 27.02
ATOM   7661  CD   PRO  1127    -14.838 -32.750  26.350  1.00 26.06
ATOM   7662  CA   PRO  1127    -16.936 -33.232  27.470  1.00 27.27
ATOM   7663  CB   PRO  1127    -16.946 -31.831  26.853  1.00 27.40
ATOM   7664  CG   PRO  1127    -15.944 -31.927  25.749  1.00 29.05
ATOM   7665  C    PRO  1127    -18.045 -34.136  26.925  1.00 27.42
ATOM   7666  O    PRO  1127    -17.839 -34.877  25.962  1.00 25.23
ATOM   7667  N    LYS  1128    -19.213 -34.081  27.559  1.00 28.67
ATOM   7668  CA   LYS  1128    -20.354 -34.895  27.145  1.00 29.40
ATOM   7669  CB   LYS  1128    -21.571 -34.609  28.033  1.00 32.06
ATOM   7670  CG   LYS  1128    -21.569 -35.326  29.376  1.00 37.86
ATOM   7671  CD   LYS  1128    -20.410 -34.884  30.254  1.00 41.77
ATOM   7672  CE   LYS  1128    -20.424 -35.614  31.586  1.00 42.92
ATOM   7673  NZ   LYS  1128    -19.313 -35.170  32.465  1.00 45.73
ATOM   7674  C    LYS  1128    -20.746 -34.674  25.691  1.00 28.13
ATOM   7675  O    LYS  1128    -21.216 -35.595  25.020  1.00 28.71
ATOM   7676  N    PHE  1129    -20.549 -33.452  25.208  1.00 25.91
ATOM   7677  CA   PHE  1129    -20.902 -33.098  23.834  1.00 24.94
ATOM   7678  CB   PHE  1129    -21.220 -31.605  23.761  1.00 24.88
ATOM   7679  CG   PHE  1129    -20.113 -30.717  24.268  1.00 25.53
ATOM   7680  CD1  PHE  1129    -18.967 -30.501  23.508  1.00 25.50
ATOM   7681  CD2  PHE  1129    -20.218 -30.098  25.508  1.00 26.10
ATOM   7682  CE1  PHE  1129    -17.938 -29.678  23.976  1.00 24.44
ATOM   7683  CE2  PHE  1129    -19.196 -29.272  25.989  1.00 28.35
ATOM   7684  CZ   PHE  1129    -18.055 -29.062  25.219  1.00 25.02
ATOM   7685  C    PHE  1129    -19.830 -33.444  22.809  1.00 24.51
ATOM   7686  O    PHE  1129    -20.017 -33.241  21.608  1.00 25.21
ATOM   7687  N    ALA  1130    -18.711 -33.975  23.285  1.00 22.79
ATOM   7688  CA   ALA  1130    -17.611 -34.322  22.400  1.00 22.40
ATOM   7689  CB   ALA  1130    -16.285 -33.933  23.047  1.00 22.61
ATOM   7690  C    ALA  1130    -17.587 -35.793  22.030  1.00 22.33
ATOM   7691  O    ALA  1130    -18.222 -36.627  22.674  1.00 23.47
ATOM   7692  N    LYS  1131    -16.824 -36.105  20.992  1.00 21.42
ATOM   7693  CA   LYS  1131    -16.699 -37.473  20.534  1.00 21.01
ATOM   7694  CB   LYS  1131    -17.667 -37.723  19.374  1.00 21.85
ATOM   7695  CG   LYS  1131    -17.613 -39.131  18.807  1.00 25.99
ATOM   7696  CD   LYS  1131    -18.660 -39.339  17.722  1.00 27.36
ATOM   7697  CE   LYS  1131    -18.521 -40.719  17.096  1.00 28.45
ATOM   7698  NZ   LYS  1131    -19.590 -41.000  16.100  1.00 30.79
ATOM   7699  C    LYS  1131    -15.272 -37.770  20.099  1.00 20.50
ATOM   7700  O    LYS  1131    -14.615 -36.946  19.456  1.00 19.85
ATOM   7701  N    ASN  1132    -14.788 -38.946  20.475  1.00 18.18
ATOM   7702  CA   ASN  1132    -13.450 -39.373  20.100  1.00 19.09
ATOM   7703  CB   ASN  1132    -12.860 -40.286  21.178  1.00 18.83
ATOM   7704  CG   ASN  1132    -11.520 -40.864  20.775  1.00 18.02
ATOM   7705  OD1  ASN  1132    -11.079 -40.694  19.642  1.00 17.99
ATOM   7706  ND2  ASN  1132    -10.872 -41.557  21.696  1.00 17.64
ATOM   7707  C    ASN  1132    -13.563 -40.141  18.786  1.00 18.64
ATOM   7708  O    ASN  1132    -13.884 -41.332  18.781  1.00 19.00
ATOM   7709  N    PHE  1133    -13.296 -39.460  17.678  1.00 18.32
ATOM   7710  CA   PHE  1133    -13.376 -40.079  16.361  1.00 18.77
ATOM   7711  CB   PHE  1133    -13.485 -39.008  15.268  1.00 19.12
ATOM   7712  CG   PHE  1133    -14.774 -38.242  15.297  1.00 19.88
ATOM   7713  CD1  PHE  1133    -14.925 -37.142  16.127  1.00 20.42
ATOM   7714  CD2  PHE  1133    -15.858 -38.656  14.531  1.00 21.73
ATOM   7715  CE1  PHE  1133    -16.144 -36.453  16.200  1.00 22.12
ATOM   7716  CE2  PHE  1133    -17.086 -37.978  14.592  1.00 22.46
ATOM   7717  CZ   PHE  1133    -17.225 -36.879  15.431  1.00 21.23
ATOM   7718  C    PHE  1133    -12.208 -40.999  16.036  1.00 18.83
ATOM   7719  O    PHE  1133    -12.314 -41.836  15.144  1.00 19.05
ATOM   7720  N    LEU  1134    -11.094 -40.849  16.749  1.00 17.75
ATOM   7721  CA   LEU  1134     -9.920 -41.686  16.488  1.00 18.27
ATOM   7722  CB   LEU  1134     -8.691 -41.149  17.230  1.00 17.93
ATOM   7723  CG   LEU  1134     -7.395 -41.958  17.089  1.00 19.52
ATOM   7724  CD1  LEU  1134     -6.983 -41.987  15.625  1.00 18.91
ATOM   7725  CD2  LEU  1134     -6.271 -41.335  17.936  1.00 16.96
ATOM   7726  C    LEU  1134    -10.170 -43.126  16.908  1.00 19.68
ATOM   7727  O    LEU  1134     -9.860 -44.059  16.167  1.00 17.88
ATOM   7728  N    ALA  1135    -10.727 -43.297  18.101  1.00 22.36
```

```
ATOM    7729   CA   ALA   1135      -11.027 -44.623  18.617  1.00 27.76
ATOM    7730   CB   ALA   1135      -11.775 -44.513  19.934  1.00 26.50
ATOM    7731   C    ALA   1135      -11.867 -45.387  17.603  1.00 32.49
ATOM    7732   O    ALA   1135      -11.683 -46.590  17.403  1.00 33.61
ATOM    7733   N    GLU   1136      -12.785 -44.668  16.964  1.00 36.50
ATOM    7734   CA   GLU   1136      -13.676 -45.240  15.963  1.00 40.36
ATOM    7735   CB   GLU   1136      -14.606 -44.158  15.403  1.00 43.73
ATOM    7736   CG   GLU   1136      -15.434 -43.403  16.441  1.00 48.10
ATOM    7737   CD   GLU   1136      -16.536 -44.250  17.054  1.00 50.51
ATOM    7738   OE1  GLU   1136      -16.222 -45.167  17.846  1.00 51.66
ATOM    7739   OE2  GLU   1136      -17.719 -44.002  16.735  1.00 51.42
ATOM    7740   C    GLU   1136      -12.865 -45.831  14.820  1.00 41.02
ATOM    7741   O    GLU   1136      -12.942 -47.026  14.544  1.00 42.71
ATOM    7742   N    THR   1137      -12.091 -44.979  14.155  1.00 39.55
ATOM    7743   CA   THR   1137      -11.273 -45.406  13.033  1.00 38.43
ATOM    7744   CB   THR   1137      -10.911 -44.218  12.124  1.00 39.66
ATOM    7745   OG1  THR   1137       -9.779 -44.569  11.313  1.00 41.87
ATOM    7746   CG2  THR   1137      -10.595 -42.973  12.953  1.00 37.36
ATOM    7747   C    THR   1137       -9.993 -46.105  13.474  1.00 37.92
ATOM    7748   O    THR   1137       -9.965 -47.326  13.641  1.00 40.29
ATOM    7749   N    GLY   1138       -8.932 -45.333  13.659  1.00 33.87
ATOM    7750   CA   GLY   1138       -7.669 -45.905  14.084  1.00 31.20
ATOM    7751   C    GLY   1138       -6.522 -45.066  13.574  1.00 29.12
ATOM    7752   O    GLY   1138       -5.366 -45.257  13.951  1.00 27.41
ATOM    7753   N    ASP   1139       -6.865 -44.119  12.711  1.00 25.34
ATOM    7754   CA   ASP   1139       -5.893 -43.224  12.105  1.00 23.78
ATOM    7755   CB   ASP   1139       -5.746 -43.614  10.635  1.00 27.59
ATOM    7756   CG   ASP   1139       -5.008 -42.595   9.841  1.00 30.02
ATOM    7757   OD1  ASP   1139       -5.661 -41.880   9.048  1.00 26.93
ATOM    7758   OD2  ASP   1139       -3.776 -42.508  10.021  1.00 33.99
ATOM    7759   C    ASP   1139       -6.398 -41.781  12.260  1.00 19.81
ATOM    7760   O    ASP   1139       -7.592 -41.536  12.137  1.00 17.74
ATOM    7761   N    ILE   1140       -5.505 -40.832  12.548  1.00 18.99
ATOM    7762   CA   ILE   1140       -5.937 -39.445  12.737  1.00 16.56
ATOM    7763   CB   ILE   1140       -4.777 -38.540  13.260  1.00 15.40
ATOM    7764   CG2  ILE   1140       -5.216 -37.074  13.303  1.00 14.63
ATOM    7765   CG1  ILE   1140       -4.378 -38.987  14.673  1.00 14.66
ATOM    7766   CD1  ILE   1140       -3.217 -38.193  15.276  1.00 14.86
ATOM    7767   C    ILE   1140       -6.576 -38.792  11.507  1.00 15.51
ATOM    7768   O    ILE   1140       -7.594 -38.099  11.627  1.00 15.94
ATOM    7769   N    ARG   1141       -6.006 -39.003  10.325  1.00 15.97
ATOM    7770   CA   ARG   1141       -6.596 -38.411   9.129  1.00 17.73
ATOM    7771   CB   ARG   1141       -5.678 -38.608   7.916  1.00 18.46
ATOM    7772   CG   ARG   1141       -4.473 -37.682   7.944  1.00 20.14
ATOM    7773   CD   ARG   1141       -3.493 -37.933   6.816  1.00 19.99
ATOM    7774   NE   ARG   1141       -2.379 -36.984   6.875  1.00 21.20
ATOM    7775   CZ   ARG   1141       -1.465 -36.945   7.843  1.00 21.99
ATOM    7776   NH1  ARG   1141       -1.511 -37.805   8.851  1.00 20.45
ATOM    7777   NH2  ARG   1141       -0.497 -36.042   7.804  1.00 23.21
ATOM    7778   C    ARG   1141       -7.970 -39.026   8.885  1.00 17.66
ATOM    7779   O    ARG   1141       -8.910 -38.330   8.484  1.00 16.58
ATOM    7780   N    ALA   1142       -8.096 -40.325   9.146  1.00 17.72
ATOM    7781   CA   ALA   1142       -9.377 -41.004   8.963  1.00 17.43
ATOM    7782   CB   ALA   1142       -9.208 -42.515   9.140  1.00 19.12
ATOM    7783   C    ALA   1142      -10.395 -40.471   9.962  1.00 19.39
ATOM    7784   O    ALA   1142      -11.594 -40.372   9.663  1.00 18.01
ATOM    7785   N    ALA   1143       -9.925 -40.132  11.158  1.00 17.42
ATOM    7786   CA   ALA   1143      -10.824 -39.600  12.177  1.00 18.14
ATOM    7787   CB   ALA   1143      -10.087 -39.468  13.510  1.00 17.85
ATOM    7788   C    ALA   1143      -11.350 -38.240  11.716  1.00 16.90
ATOM    7789   O    ALA   1143      -12.525 -37.921  11.900  1.00 16.07
ATOM    7790   N    VAL   1144      -10.464 -37.449  11.115  1.00 16.80
ATOM    7791   CA   VAL   1144      -10.826 -36.135  10.603  1.00 17.64
ATOM    7792   CB   VAL   1144       -9.604 -35.412   9.989  1.00 17.57
ATOM    7793   CG1  VAL   1144      -10.050 -34.114   9.326  1.00 15.63
ATOM    7794   CG2  VAL   1144       -8.561 -35.116  11.078  1.00 15.39
ATOM    7795   C    VAL   1144      -11.900 -36.290   9.528  1.00 18.77
ATOM    7796   O    VAL   1144      -12.928 -35.615   9.560  1.00 17.83
ATOM    7797   N    ARG   1145      -11.656 -37.181   8.575  1.00 19.43
ATOM    7798   CA   ARG   1145      -12.619 -37.408   7.507  1.00 21.72
ATOM    7799   CB   ARG   1145      -12.079 -38.435   6.514  1.00 22.86
ATOM    7800   CG   ARG   1145      -10.907 -37.920   5.690  1.00 23.87
ATOM    7801   CD   ARG   1145      -10.570 -38.881   4.565  1.00 26.94
ATOM    7802   NE   ARG   1145      -10.060 -40.162   5.055  1.00 27.22
ATOM    7803   CZ   ARG   1145       -8.771 -40.448   5.207  1.00 26.31
ATOM    7804   NH1  ARG   1145       -7.846 -39.544   4.909  1.00 25.59
ATOM    7805   NH2  ARG   1145       -8.407 -41.646   5.639  1.00 27.26
```

```
ATOM    7806  C    ARG   1145    -13.965 -37.865    8.050  1.00 22.32
ATOM    7807  O    ARG   1145    -15.010 -37.470    7.531  1.00 22.86
ATOM    7808  N    GLN   1146    -13.941 -38.685    9.098  1.00 21.32
ATOM    7809  CA   GLN   1146    -15.171 -39.190    9.701  1.00 22.69
ATOM    7810  CB   GLN   1146    -14.855 -40.318   10.691  1.00 24.27
ATOM    7811  CG   GLN   1146    -16.081 -41.095   11.161  1.00 29.43
ATOM    7812  CD   GLN   1146    -15.732 -42.213   12.132  1.00 34.61
ATOM    7813  OE1  GLN   1146    -14.892 -43.067   11.839  1.00 36.88
ATOM    7814  NE2  GLN   1146    -16.382 -42.216   13.293  1.00 35.93
ATOM    7815  C    GLN   1146    -15.918 -38.077   10.423  1.00 22.56
ATOM    7816  O    GLN   1146    -17.152 -38.048   10.448  1.00 19.62
ATOM    7817  N    TYR   1147    -15.167 -37.165   11.027  1.00 20.38
ATOM    7818  CA   TYR   1147    -15.774 -36.051   11.739  1.00 22.67
ATOM    7819  CB   TYR   1147    -14.690 -35.256   12.478  1.00 20.90
ATOM    7820  CG   TYR   1147    -15.136 -33.900   12.979  1.00 21.86
ATOM    7821  CD1  TYR   1147    -16.312 -33.756   13.721  1.00 20.32
ATOM    7822  CE1  TYR   1147    -16.718 -32.511   14.186  1.00 21.50
ATOM    7823  CD2  TYR   1147    -14.374 -32.759   12.719  1.00 20.91
ATOM    7824  CE2  TYR   1147    -14.769 -31.509   13.180  1.00 20.76
ATOM    7825  CZ   TYR   1147    -15.939 -31.389   13.910  1.00 22.56
ATOM    7826  OH   TYR   1147    -16.345 -30.152   14.358  1.00 21.72
ATOM    7827  C    TYR   1147    -16.509 -35.161   10.737  1.00 22.11
ATOM    7828  O    TYR   1147    -17.643 -34.752   10.969  1.00 23.56
ATOM    7829  N    MET   1148    -15.855 -34.881    9.618  1.00 22.47
ATOM    7830  CA   MET   1148    -16.441 -34.051    8.580  1.00 23.31
ATOM    7831  CB   MET   1148    -15.427 -33.835    7.459  1.00 24.14
ATOM    7832  CG   MET   1148    -14.182 -33.075    7.879  1.00 25.93
ATOM    7833  SD   MET   1148    -12.910 -33.130    6.619  1.00 28.97
ATOM    7834  CE   MET   1148    -13.585 -32.034    5.386  1.00 28.81
ATOM    7835  C    MET   1148    -17.701 -34.704    8.012  1.00 25.12
ATOM    7836  O    MET   1148    -18.743 -34.055    7.868  1.00 24.49
ATOM    7837  N    ALA   1149    -17.599 -35.992    7.700  1.00 24.17
ATOM    7838  CA   ALA   1149    -18.718 -36.747    7.133  1.00 24.28
ATOM    7839  CB   ALA   1149    -18.254 -38.152    6.750  1.00 23.46
ATOM    7840  C    ALA   1149    -19.914 -36.828    8.079  1.00 24.06
ATOM    7841  O    ALA   1149    -21.058 -36.613    7.669  1.00 23.40
ATOM    7842  N    GLU   1150    -19.657 -37.135    9.346  1.00 24.16
ATOM    7843  CA   GLU   1150    -20.739 -37.235   10.319  1.00 26.28
ATOM    7844  CB   GLU   1150    -20.228 -37.828   11.634  1.00 27.57
ATOM    7845  CG   GLU   1150    -20.156 -39.347   11.608  1.00 28.54
ATOM    7846  CD   GLU   1150    -19.614 -39.939   12.890  1.00 28.17
ATOM    7847  OE1  GLU   1150    -20.027 -39.506   13.984  1.00 28.42
ATOM    7848  OE2  GLU   1150    -18.778 -40.857   12.796  1.00 33.92
ATOM    7849  C    GLU   1150    -21.421 -35.900   10.581  1.00 26.66
ATOM    7850  O    GLU   1150    -22.597 -35.859   10.949  1.00 27.42
ATOM    7851  N    VAL   1151    -20.685 -34.808   10.408  1.00 27.27
ATOM    7852  CA   VAL   1151    -21.263 -33.486   10.617  1.00 27.27
ATOM    7853  CB   VAL   1151    -20.179 -32.384   10.668  1.00 27.12
ATOM    7854  CG1  VAL   1151    -20.835 -31.005   10.609  1.00 23.63
ATOM    7855  CG2  VAL   1151    -19.372 -32.512   11.945  1.00 23.64
ATOM    7856  C    VAL   1151    -22.242 -33.154    9.495  1.00 28.77
ATOM    7857  O    VAL   1151    -23.384 -32.777    9.749  1.00 28.71
ATOM    7858  N    GLU   1152    -21.792 -33.304    8.256  1.00 30.65
ATOM    7859  CA   GLU   1152    -22.637 -32.998    7.112  1.00 33.92
ATOM    7860  CB   GLU   1152    -21.836 -33.117    5.813  1.00 34.31
ATOM    7861  CG   GLU   1152    -22.641 -32.774    4.567  1.00 38.13
ATOM    7862  CD   GLU   1152    -21.775 -32.545    3.345  1.00 39.92
ATOM    7863  OE1  GLU   1152    -22.337 -32.401    2.240  1.00 43.20
ATOM    7864  OE2  GLU   1152    -20.535 -32.498    3.485  1.00 41.00
ATOM    7865  C    GLU   1152    -23.867 -33.895    7.051  1.00 34.76
ATOM    7866  O    GLU   1152    -24.942 -33.456    6.640  1.00 35.70
ATOM    7867  N    SER   1153    -23.709 -35.147    7.468  1.00 34.67
ATOM    7868  CA   SER   1153    -24.814 -36.102    7.456  1.00 34.62
ATOM    7869  CB   SER   1153    -24.284 -37.534    7.559  1.00 35.72
ATOM    7870  OG   SER   1153    -23.645 -37.926    6.357  1.00 39.86
ATOM    7871  C    SER   1153    -25.787 -35.852    8.596  1.00 32.97
ATOM    7872  O    SER   1153    -26.974 -36.157    8.487  1.00 33.54
ATOM    7873  N    GLY   1154    -25.280 -35.302    9.692  1.00 30.02
ATOM    7874  CA   GLY   1154    -26.130 -35.039   10.835  1.00 28.64
ATOM    7875  C    GLY   1154    -25.952 -36.090   11.912  1.00 27.31
ATOM    7876  O    GLY   1154    -26.491 -35.960   13.008  1.00 27.96
ATOM    7877  N    VAL   1155    -25.197 -37.140   11.599  1.00 27.21
ATOM    7878  CA   VAL   1155    -24.944 -38.208   12.558  1.00 27.30
ATOM    7879  CB   VAL   1155    -23.969 -39.252   11.984  1.00 27.92
ATOM    7880  CG1  VAL   1155    -23.728 -40.357   13.005  1.00 30.23
ATOM    7881  CG2  VAL   1155    -24.528 -39.828   10.692  1.00 31.88
ATOM    7882  C    VAL   1155    -24.333 -37.614   13.823  1.00 26.47
```

```
ATOM   7883  O    VAL  1155     -24.616 -38.065  14.935  1.00 26.28
ATOM   7884  N    TYR  1156     -23.485 -36.606  13.636  1.00 25.70
ATOM   7885  CA   TYR  1156     -22.828 -35.921  14.746  1.00 25.82
ATOM   7886  CB   TYR  1156     -21.307 -36.124  14.709  1.00 24.74
ATOM   7887  CG   TYR  1156     -20.605 -35.437  15.867  1.00 24.07
ATOM   7888  CD1  TYR  1156     -20.649 -35.976  17.156  1.00 23.28
ATOM   7889  CE1  TYR  1156     -20.078 -35.306  18.242  1.00 23.96
ATOM   7890  CD2  TYR  1156     -19.964 -34.213  15.690  1.00 24.41
ATOM   7891  CE2  TYR  1156     -19.392 -33.533  16.768  1.00 24.50
ATOM   7892  CZ   TYR  1156     -19.455 -34.083  18.041  1.00 24.23
ATOM   7893  OH   TYR  1156     -18.920 -33.395  19.112  1.00 23.15
ATOM   7894  C    TYR  1156     -23.116 -34.424  14.696  1.00 26.27
ATOM   7895  O    TYR  1156     -22.996 -33.799  13.642  1.00 26.36
ATOM   7896  N    PRO  1157     -23.471 -33.826  15.844  1.00 27.37
ATOM   7897  CD   PRO  1157     -23.555 -32.365  16.017  1.00 28.85
ATOM   7898  CA   PRO  1157     -23.600 -34.509  17.132  1.00 28.73
ATOM   7899  CB   PRO  1157     -23.499 -33.365  18.138  1.00 28.98
ATOM   7900  CG   PRO  1157     -24.117 -32.234  17.416  1.00 29.31
ATOM   7901  C    PRO  1157     -24.882 -35.319  17.290  1.00 30.00
ATOM   7902  O    PRO  1157     -25.928 -34.970  16.740  1.00 29.72
ATOM   7903  N    GLY  1158     -24.786 -36.409  18.046  1.00 30.34
ATOM   7904  CA   GLY  1158     -25.940 -37.257  18.278  1.00 31.69
ATOM   7905  C    GLY  1158     -26.668 -36.843  19.540  1.00 32.83
ATOM   7906  O    GLY  1158     -26.240 -35.921  20.234  1.00 31.48
ATOM   7907  N    GLU  1159     -27.770 -37.521  19.844  1.00 33.48
ATOM   7908  CA   GLU  1159     -28.538 -37.198  21.036  1.00 34.89
ATOM   7909  CB   GLU  1159     -29.791 -38.075  21.122  1.00 36.68
ATOM   7910  CG   GLU  1159     -30.853 -37.515  22.049  1.00 38.05
ATOM   7911  CD   GLU  1159     -31.472 -36.241  21.503  1.00 39.50
ATOM   7912  OE1  GLU  1159     -32.152 -35.527  22.269  1.00 41.54
ATOM   7913  OE2  GLU  1159     -31.282 -35.958  20.300  1.00 39.55
ATOM   7914. C    GLU  1159     -27.685 -37.403  22.283  1.00 35.20
ATOM   7915  O    GLU  1159     -27.943 -36.802  23.325  1.00 35.87
ATOM   7916  N    GLU  1160     -26.668 -38.256  22.167  1.00 35.14
ATOM   7917  CA   GLU  1160     -25.764 -38.545  23.277  1.00 35.10
ATOM   7918  CB   GLU  1160     -24.870 -39.748  22.951  1.00 37.43
ATOM   7919  CG   GLU  1160     -25.577 -40.902  22.261  1.00 41.76
ATOM   7920  CD   GLU  1160     -25.822 -40.638  20.789  1.00 42.93
ATOM   7921  OE1  GLU  1160     -24.834 -40.410  20.054  1.00 43.83
ATOM   7922  OE2  GLU  1160     -26.999 -40.666  20.368  1.00 43.38
ATOM   7923  C    GLU  1160     -24.862 -37.353  23.583  1.00 33.30
ATOM   7924  O    GLU  1160     -24.259 -37.285  24.654  1.00 31.07
ATOM   7925  N    HIS  1161     -24.777 -36.422  22.637  1.00 32.51
ATOM   7926  CA   HIS  1161     -23.930 -35.238  22.781  1.00 32.09
ATOM   7927  CB   HIS  1161     -23.016 -35.097  21.562  1.00 31.02
ATOM   7928  CG   HIS  1161     -22.355 -36.373  21.143  1.00 29.12
ATOM   7929  CD2  HIS  1161     -22.512 -37.131  20.032  1.00 27.73
ATOM   7930  ND1  HIS  1161     -21.407 -37.013  21.913  1.00 28.00
ATOM   7931  CE1  HIS  1161     -21.012 -38.112  21.296  1.00 27.95
ATOM   7932  NE2  HIS  1161     -21.667 -38.207  20.152  1.00 29.03
ATOM   7933  C    HIS  1161     -24.757 -33.965  22.899  1.00 33.71
ATOM   7934  O    HIS  1161     -24.212 -32.864  22.874  1.00 31.48
ATOM   7935  N    SER  1162     -26.069 -34.121  23.028  1.00 34.90
ATOM   7936  CA   SER  1162     -26.969 -32.981  23.107  1.00 36.32
ATOM   7937  CB   SER  1162     -28.088 -33.167  22.088  1.00 36.36
ATOM   7938  OG   SER  1162     -27.543 -33.422  20.806  1.00 37.50
ATOM   7939  C    SER  1162     -27.562 -32.748  24.492  1.00 37.54
ATOM   7940  O    SER  1162     -27.649 -33.670  25.303  1.00 37.53
ATOM   7941  N    PHE  1163     -27.969 -31.505  24.749  1.00 38.51
ATOM   7942  CA   PHE  1163     -28.563 -31.129  26.028  1.00 39.57
ATOM   7943  CB   PHE  1163     -27.764 -30.000  26.692  1.00 40.57
ATOM   7944  CG   PHE  1163     -26.323 -30.346  26.967  1.00 43.95
ATOM   7945  CD1  PHE  1163     -25.363 -30.253  25.961  1.00 44.75
ATOM   7946  CD2  PHE  1163     -25.926 -30.771  28.232  1.00 44.14
ATOM   7947  CE1  PHE  1163     -24.029 -30.575  26.213  1.00 45.36
ATOM   7948  CE2  PHE  1163     -24.595 -31.096  28.492  1.00 45.59
ATOM   7949  CZ   PHE  1163     -23.645 -30.998  27.480  1.00 44.94
ATOM   7950  C    PHE  1163     -30.007 -30.676  25.838  1.00 39.51
ATOM   7951  O    PHE  1163     -30.449 -30.433  24.715  1.00 39.54
ATOM   7952  N    HIS  1164     -30.736 -30.562  26.944  1.00 40.34
ATOM   7953  CA   HIS  1164     -32.132 -30.136  26.912  1.00 40.45
ATOM   7954  CB   HIS  1164     -33.056 -31.351  26.812  1.00 39.13
ATOM   7955  CG   HIS  1164     -32.963 -32.071  25.504  1.00 37.46
ATOM   7956  CD2  HIS  1164     -32.563 -33.329  25.201  1.00 36.29
ATOM   7957  ND1  HIS  1164     -33.293 -31.476  24.305  1.00 36.11
ATOM   7958  CE1  HIS  1164     -33.100 -32.336  23.321  1.00 34.87
ATOM   7959  NE2  HIS  1164     -32.657 -33.468  23.837  1.00 34.05
```

```
ATOM    7960  C   HIS  1164    -32.484 -29.320  28.149  1.00 41.45
ATOM    7961  O   HIS  1164    -33.130 -28.261  27.988  1.00 42.79
ATOM    7962  OXT HIS  1164    -32.118 -29.749  29.264  1.00 42.44
ATOM    7963  C1  KPL  1165    -14.350 -24.823  22.600  1.00 37.46
ATOM    7964  C2  KPL  1165    -14.556 -23.614  21.664  1.00 35.76
ATOM    7965  C3  KPL  1165    -14.275 -24.044  20.219  1.00 36.86
ATOM    7966  C4  KPL  1165    -16.018 -23.142  21.763  1.00 37.77
ATOM    7967  O1  KPL  1165    -16.308 -22.744  23.112  1.00 39.26
ATOM    7968  C5  KPL  1165    -13.590 -22.469  22.059  1.00 34.45
ATOM    7969  O2  KPL  1165    -14.027 -21.380  22.384  1.00 34.78
ATOM    7970  C6  KPL  1165    -12.093 -22.661  22.058  1.00 32.52
ATOM    7971  O3  KPL  1165    -11.604 -23.720  21.736  1.00 31.95
ATOM    7972  O4  KPL  1165    -11.288 -21.651  22.419  1.00 28.43
ATOM    7973  CB  MET  1201    -15.474 -28.638  47.750  1.00 74.61
ATOM    7974  CG  MET  1201    -16.080 -29.937  48.288  1.00 76.04
ATOM    7975  SD  MET  1201    -15.715 -31.415  47.313  1.00 77.75
ATOM    7976  CE  MET  1201    -17.296 -31.664  46.480  1.00 77.07
ATOM    7977  C   MET  1201    -15.060 -28.920  45.290  1.00 71.84
ATOM    7978  O   MET  1201    -13.988 -29.442  45.601  1.00 72.20
ATOM    7979  N   MET  1201    -17.380 -28.524  46.164  1.00 73.50
ATOM    7980  CA  MET  1201    -15.929 -28.231  46.340  1.00 73.03
ATOM    7981  N   LYS  1202    -15.525 -28.905  44.043  1.00 69.78
ATOM    7982  CA  LYS  1202    -14.795 -29.524  42.940  1.00 67.53
ATOM    7983  CB  LYS  1202    -15.523 -30.791  42.469  1.00 68.57
ATOM    7984  CG  LYS  1202    -15.422 -31.977  43.422  1.00 69.98
ATOM    7985  CD  LYS  1202    -14.031 -32.611  43.409  1.00 70.39
ATOM    7986  CE  LYS  1202    -13.781 -33.424  42.140  1.00 70.57
ATOM    7987  NZ  LYS  1202    -13.778 -32.606  40.895  1.00 70.61
ATOM    7988  C   LYS  1202    -14.609 -28.580  41.752  1.00 64.73
ATOM    7989  O   LYS  1202    -15.029 -28.890  40.637  1.00 65.32
ATOM    7990  N   PRO  1203    -13.973 -27.414  41.973  1.00 61.55
ATOM    7991  CD  PRO  1203    -13.472 -26.591  40.856  1.00 60.49
ATOM    7992  CA  PRO  1203    -13.433 -26.929  43.248  1.00 58.33
ATOM    7993  CB  PRO  1203    -12.232 -26.108  42.802  1.00 58.95
ATOM    7994  CG  PRO  1203    -12.755 -25.453  41.571  1.00 59.90
ATOM    7995  C   PRO  1203    -14.454 -26.086  44.018  1.00 55.17
ATOM    7996  O   PRO  1203    -15.641 -26.081  43.689  1.00 55.08
ATOM    7997  N   THR  1204    -13.987 -25.372  45.039  1.00 50.88
ATOM    7998  CA  THR  1204    -14.863 -24.522  45.843  1.00 46.61
ATOM    7999  CB  THR  1204    -14.165 -24.061  47.140  1.00 46.19
ATOM    8000  OG1 THR  1204    -13.702 -25.204  47.870  1.00 46.22
ATOM    8001  CG2 THR  1204    -15.131 -23.273  48.009  1.00 45.19
ATOM    8002  C   THR  1204    -15.240 -23.288  45.026  1.00 43.63
ATOM    8003  O   THR  1204    -14.373 -22.642  44.440  1.00 42.49
ATOM    8004  N   THR  1205    -16.531 -22.966  44.985  1.00 40.26
ATOM    8005  CA  THR  1205    -17.000 -21.811  44.222  1.00 37.82
ATOM    8006  CB  THR  1205    -17.760 -22.241  42.953  1.00 38.23
ATOM    8007  OG1 THR  1205    -18.955 -22.937  43.330  1.00 39.06
ATOM    8008  CG2 THR  1205    -16.893 -23.142  42.089  1.00 39.20
ATOM    8009  C   THR  1205    -17.924 -20.887  45.002  1.00 35.47
ATOM    8010  O   THR  1205    -18.360 -21.201  46.111  1.00 34.25
ATOM    8011  N   ILE  1206    -18.226 -19.744  44.397  1.00 33.47
ATOM    8012  CA  ILE  1206    -19.104 -18.761  45.010  1.00 34.02
ATOM    8013  CB  ILE  1206    -19.263 -17.528  44.107  1.00 34.29
ATOM    8014  CG2 ILE  1206    -20.055 -16.455  44.834  1.00 33.15
ATOM    8015  CG1 ILE  1206    -17.880 -16.986  43.728  1.00 36.56
ATOM    8016  CD1 ILE  1206    -17.908 -15.950  42.616  1.00 36.92
ATOM    8017  C   ILE  1206    -20.481 -19.368  45.266  1.00 33.47
ATOM    8018  O   ILE  1206    -21.119 -19.080  46.280  1.00 33.95
ATOM    8019  N   SER  1207    -20.933 -20.218  44.350  1.00 33.47
ATOM    8020  CA  SER  1207    -22.236 -20.861  44.494  1.00 34.07
ATOM    8021  CB  SER  1207    -22.515 -21.766  43.292  1.00 34.94
ATOM    8022  OG  SER  1207    -22.693 -21.001  42.111  1.00 37.78
ATOM    8023  C   SER  1207    -22.310 -21.678  45.777  1.00 33.33
ATOM    8024  O   SER  1207    -23.392 -21.899  46.319  1.00 34.33
ATOM    8025  N   LEU  1208    -21.152 -22.121  46.259  1.00 32.96
ATOM    8026  CA  LEU  1208    -21.086 -22.919  47.477  1.00 32.87
ATOM    8027  CB  LEU  1208    -19.676 -23.496  47.651  1.00 34.16
ATOM    8028  CG  LEU  1208    -19.539 -24.923  48.189  1.00 35.32
ATOM    8029  CD1 LEU  1208    -18.071 -25.215  48.489  1.00 34.07
ATOM    8030  CD2 LEU  1208    -20.368 -25.092  49.440  1.00 34.02
ATOM    8031  C   LEU  1208    -21.444 -22.062  48.687  1.00 31.67
ATOM    8032  O   LEU  1208    -22.198 -22.488  49.563  1.00 30.68
ATOM    8033  N   LEU  1209    -20.902 -20.848  48.728  1.00 29.45
ATOM    8034  CA  LEU  1209    -21.158 -19.934  49.834  1.00 28.92
ATOM    8035  CB  LEU  1209    -20.185 -18.753  49.772  1.00 25.98
ATOM    8036  CG  LEU  1209    -18.698 -19.117  49.742  1.00 25.45
```

```
ATOM  8037  CD1 LEU 1209    -17.859 -17.844  49.746  1.00 22.70
ATOM  8038  CD2 LEU 1209    -18.356 -19.975  50.947  1.00 23.49
ATOM  8039  C   LEU 1209    -22.595 -19.425  49.802  1.00 29.02
ATOM  8040  O   LEU 1209    -23.207 -19.198  50.844  1.00 28.22
ATOM  8041  N   GLN 1210    -23.126 -19.239  48.598  1.00 30.69
ATOM  8042  CA  GLN 1210    -24.497 -18.763  48.436  1.00 32.68
ATOM  8043  CB  GLN 1210    -24.777 -18.499  46.954  1.00 32.40
ATOM  8044  CG  GLN 1210    -26.138 -17.885  46.648  1.00 33.66
ATOM  8045  CD  GLN 1210    -26.378 -16.573  47.372  1.00 33.08
ATOM  8046  OE1 GLN 1210    -26.857 -16.553  48.506  1.00 33.39
ATOM  8047  NE2 GLN 1210    -26.037 -15.467  46.722  1.00 31.00
ATOM  8048  C   GLN 1210    -25.436 -19.831  48.994  1.00 33.63
ATOM  8049  O   GLN 1210    -26.437 -19.520  49.643  1.00 34.19
ATOM  8050  N   LYS 1211    -25.095 -21.093  48.750  1.00 35.83
ATOM  8051  CA  LYS 1211    -25.888 -22.212  49.247  1.00 37.75
ATOM  8052  CB  LYS 1211    -25.367 -23.533  48.670  1.00 39.41
ATOM  8053  CG  LYS 1211    -25.864 -24.766  49.413  1.00 43.61
ATOM  8054  CD  LYS 1211    -25.471 -26.064  48.717  1.00 46.26
ATOM  8055  CE  LYS 1211    -26.318 -26.314  47.477  1.00 47.80
ATOM  8056  NZ  LYS 1211    -26.008 -27.629  46.849  1.00 49.02
ATOM  8057  C   LYS 1211    -25.833 -22.258  50.775  1.00 38.19
ATOM  8058  O   LYS 1211    -26.822 -22.579  51.434  1.00 37.83
ATOM  8059  N   TYR 1212    -24.673 -21.930  51.334  1.00 37.94
ATOM  8060  CA  TYR 1212    -24.493 -21.933  52.781  1.00 38.24
ATOM  8061  CB  TYR 1212    -23.032 -21.643  53.128  1.00 39.33
ATOM  8062  CG  TYR 1212    -22.101 -22.817  52.936  1.00 41.48
ATOM  8063  CD1 TYR 1212    -20.724 -22.623  52.830  1.00 43.21
ATOM  8064  CE1 TYR 1212    -19.854 -23.698  52.690  1.00 44.20
ATOM  8065  CD2 TYR 1212    -22.587 -24.125  52.897  1.00 42.82
ATOM  8066  CE2 TYR 1212    -21.724 -25.210  52.759  1.00 44.18
ATOM  8067  CZ  TYR 1212    -20.360 -24.987  52.657  1.00 44.87
ATOM  8068  OH  TYR 1212    -19.496 -26.048  52.522  1.00 46.35
ATOM  8069  C   TYR 1212    -25.388 -20.922  53.485  1.00 37.78
ATOM  8070  O   TYR 1212    -25.946 -21.211  54.544  1.00 36.95
ATOM  8071  N   LYS 1213    -25.514 -19.731  52.906  1.00 37.50
ATOM  8072  CA  LYS 1213    -26.348 -18.695  53.506  1.00 37.53
ATOM  8073  CB  LYS 1213    -26.256 -17.387  52.707  1.00 35.24
ATOM  8074  CG  LYS 1213    -27.168 -16.292  53.248  1.00 31.66
ATOM  8075  CD  LYS 1213    -26.732 -14.894  52.831  1.00 27.83
ATOM  8076  CE  LYS 1213    -27.589 -13.850  53.530  1.00 25.23
ATOM  8077  NZ  LYS 1213    -27.068 -12.467  53.408  1.00 24.51
ATOM  8078  C   LYS 1213    -27.803 -19.146  53.591  1.00 39.33
ATOM  8079  O   LYS 1213    -28.451 -18.980  54.624  1.00 39.00
ATOM  8080  N   GLN 1214    -28.312 -19.717  52.505  1.00 40.82
ATOM  8081  CA  GLN 1214    -29.689 -20.190  52.481  1.00 43.81
ATOM  8082  CB  GLN 1214    -30.060 -20.692  51.084  1.00 45.23
ATOM  8083  CG  GLN 1214    -30.123 -19.591  50.037  1.00 48.26
ATOM  8084  CD  GLN 1214    -30.583 -20.097  48.684  1.00 50.37
ATOM  8085  OE1 GLN 1214    -31.663 -20.683  48.561  1.00 52.18
ATOM  8086  NE2 GLN 1214    -29.767 -19.870  47.656  1.00 50.33
ATOM  8087  C   GLN 1214    -29.889 -21.302  53.501  1.00 44.29
ATOM  8088  O   GLN 1214    -30.948 -21.406  54.118  1.00 44.96
ATOM  8089  N   GLU 1215    -28.862 -22.126  53.683  1.00 45.06
ATOM  8090  CA  GLU 1215    -28.934 -23.229  54.633  1.00 45.32
ATOM  8091  CB  GLU 1215    -27.960 -24.343  54.241  1.00 46.90
ATOM  8092  CG  GLU 1215    -28.102 -24.843  52.815  1.00 49.76
ATOM  8093  CD  GLU 1215    -27.175 -26.008  52.522  1.00 51.37
ATOM  8094  OE1 GLU 1215    -25.983 -25.927  52.888  1.00 52.64
ATOM  8095  OE2 GLU 1215    -27.635 -27.000  51.920  1.00 52.49
ATOM  8096  C   GLU 1215    -28.597 -22.744  56.036  1.00 44.97
ATOM  8097  O   GLU 1215    -28.513 -23.541  56.969  1.00 44.92
ATOM  8098  N   LYS 1216    -28.400 -21.437  56.182  1.00 44.76
ATOM  8099  CA  LYS 1216    -28.069 -20.852  57.479  1.00 43.95
ATOM  8100  CB  LYS 1216    -29.252 -21.001  58.442  1.00 45.68
ATOM  8101  CG  LYS 1216    -30.481 -20.179  58.071  1.00 48.07
ATOM  8102  CD  LYS 1216    -30.234 -18.687  58.255  1.00 49.08
ATOM  8103  CE  LYS 1216    -31.475 -17.871  57.914  1.00 50.43
ATOM  8104  NZ  LYS 1216    -32.654 -18.265  58.740  1.00 51.79
ATOM  8105  C   LYS 1216    -26.829 -21.509  58.085  1.00 42.80
ATOM  8106  O   LYS 1216    -26.763 -21.741  59.296  1.00 42.94
ATOM  8107  N   LYS 1217    -25.850 -21.813  57.239  1.00 40.87
ATOM  8108  CA  LYS 1217    -24.613 -22.444  57.693  1.00 39.09
ATOM  8109  CB  LYS 1217    -24.290 -23.667  56.830  1.00 39.84
ATOM  8110  CG  LYS 1217    -22.929 -24.284  57.143  1.00 42.69
ATOM  8111  CD  LYS 1217    -22.622 -25.474  56.250  1.00 45.14
ATOM  8112  CE  LYS 1217    -23.542 -26.651  56.546  1.00 47.62
ATOM  8113  NZ  LYS 1217    -23.209 -27.838  55.706  1.00 48.86
```

```
ATOM   8114  C    LYS  1217   -23.439 -21.471  57.646  1.00 36.74
ATOM   8115  O    LYS  1217   -22.930 -21.156  56.573  1.00 37.26
ATOM   8116  N    ARG  1218   -23.008 -21.003  58.812  1.00 33.47
ATOM   8117  CA   ARG  1218   -21.892 -20.069  58.890  1.00 31.52
ATOM   8118  CB   ARG  1218   -21.799 -19.498  60.309  1.00 32.55
ATOM   8119  CG   ARG  1218   -22.894 -18.476  60.603  1.00 31.60
ATOM   8120  CD   ARG  1218   -22.918 -18.029  62.052  1.00 33.28
ATOM   8121  NE   ARG  1218   -23.699 -18.938  62.890  1.00 33.49
ATOM   8122  CZ   ARG  1218   -24.049 -18.678  64.145  1.00 32.58
ATOM   8123  NH1  ARG  1218   -23.688 -17.537  64.716  1.00 33.26
ATOM   8124  NH2  ARG  1218   -24.767 -19.554  64.828  1.00 34.35
ATOM   8125  C    ARG  1218   -20.578 -20.737  58.476  1.00 30.31
ATOM   8126  O    ARG  1218   -20.223 -21.797  58.990  1.00 31.64
ATOM   8127  N    PHE  1219   -19.864 -20.112  57.543  1.00 28.09
ATOM   8128  CA   PHE  1219   -18.607 -20.656  57.038  1.00 24.32
ATOM   8129  CB   PHE  1219   -18.701 -20.816  55.518  1.00 23.44
ATOM   8130  CG   PHE  1219   -19.005 -19.537  54.794  1.00 22.44
ATOM   8131  CD1  PHE  1219   -17.975 -18.711  54.343  1.00 21.27
ATOM   8132  CD2  PHE  1219   -20.321 -19.131  54.606  1.00 22.38
ATOM   8133  CE1  PHE  1219   -18.253 -17.495  53.719  1.00 20.07
ATOM   8134  CE2  PHE  1219   -20.612 -17.918  53.983  1.00 20.42
ATOM   8135  CZ   PHE  1219   -19.575 -17.098  53.539  1.00 22.14
ATOM   8136  C    PHE  1219   -17.384 -19.811  57.411  1.00 24.16
ATOM   8137  O    PHE  1219   -17.476 -18.588  57.576  1.00 20.50
ATOM   8138  N    ALA  1220   -16.238 -20.474  57.541  1.00 23.05
ATOM   8139  CA   ALA  1220   -14.992 -19.801  57.908  1.00 23.62
ATOM   8140  CB   ALA  1220   -14.195 -20.681  58.867  1.00 23.36
ATOM   8141  C    ALA  1220   -14.134 -19.450  56.698  1.00 20.64
ATOM   8142  O    ALA  1220.  -14.081 -20.197  55.729  1.00 20.76
ATOM   8143  N    THR  1221   -13.462 -18.309  56.773  1.00 20.56
ATOM   8144  CA   THR  1221   -12.593 -17.846  55.700  1.00 21.27
ATOM   8145  CB   THR  1221   -13.248 -16.670  54.950  1.00 22.71
ATOM   8146  OG1  THR  1221   -14.532 -17.084  54.456  1.00 25.31
ATOM   8147  CG2  THR  1221   -12.391 -16.229  53.790  1.00 26.49
ATOM  -8148  C    THR  1221   -11.271 -17.393  56.329  1.00 20.19
ATOM   8149  O    THR  1221   -11.225 -17.055  57.515  1.00 19.48
ATOM   8150  N    ILE  1222   -10.192 -17.369  55.552  1.00 20.17
ATOM   8151  CA   ILE  1222    -8.912 -16.975  56.129  1.00 18.40
ATOM   8152  CB   ILE  1222    -8.229 -18.211  56.779  1.00 19.49
ATOM   8153  CG2  ILE  1222    -7.614 -19.105  55.696  1.00 20.26
ATOM   8154  CG1  ILE  1222    -7.184 -17.753  57.794  1.00 21.68
ATOM   8155  CD1  ILE  1222    -6.591 -18.886  58.621  1.00 25.50
ATOM   8156  C    ILE  1222    -7.972 -16.338  55.115  1.00 18.20
ATOM   8157  O    ILE  1222    -8.138 -16.510  53.910  1.00 17.49
ATOM   8158  N    THR  1223    -6.998 -15.575  55.602  1.00 19.22
ATOM   8159  CA   THR  1223    -6.049 -14.950  54.695  1.00 19.12
ATOM   8160  CB   THR  1223    -5.544 -13.590  55.210  1.00 19.60
ATOM   8161  OG1  THR  1223    -4.681 -13.785  56.332  1.00 20.12
ATOM   8162  CG2  THR  1223    -6.719 -12.709  55.625  1.00 23.60
ATOM   8163  C    THR  1223    -4.870 -15.900  54.524  1.00 16.85
ATOM   8164  O    THR  1223    -4.588 -16.719  55.398  1.00 16.75
ATOM   8165  N    ALA  1224    -4.196 -15.801  53.386  1.00 16.57
ATOM   8166  CA   ALA  1224    -3.042 -16.643  53.098  1.00 16.77
ATOM   8167  CB   ALA  1224    -3.494 -17.980  52.530  1.00 16.53
ATOM   8168  C    ALA  1224    -2.181 -15.886  52.099  1.00 15.47
ATOM   8169  O    ALA  1224    -2.704 -15.171  51.243  1.00 13.50
ATOM   8170  N    TYR  1225    -0.864 -16.043  52.203  1.00 13.85
ATOM   8171  CA   TYR  1225     0.043 -15.321  51.318  1.00 14.02
ATOM   8172  CB   TYR  1225     0.616 -14.088  52.033  1.00 16.12
ATOM   8173  CG   TYR  1225    -0.361 -13.344  52.918  1.00 16.49
ATOM   8174  CD1  TYR  1225    -0.398 -13.577  54.293  1.00 17.47
ATOM   8175  CE1  TYR  1225    -1.295 -12.901  55.118  1.00 19.34
ATOM   8176  CD2  TYR  1225    -1.250 -12.411  52.382  1.00 16.05
ATOM   8177  CE2  TYR  1225    -2.155 -11.728  53.197  1.00 17.27
ATOM   8178  CZ   TYR  1225    -2.170 -11.982  54.566  1.00 17.92
ATOM   8179  OH   TYR  1225    -3.073 -11.324  55.374  1.00 18.55
ATOM   8180  C    TYR  1225     1.204 -16.158  50.807  1.00 15.21
ATOM   8181  O    TYR  1225     2.120 -15.630  50.183  1.00 16.68
ATOM   8182  N    ASP  1226     1.173 -17.458  51.071  1.00 14.35
ATOM   8183  CA   ASP  1226     2.251 -18.321  50.620  1.00 14.15
ATOM   8184  CB   ASP  1226     3.420 -18.262  51.615  1.00 12.62
ATOM   8185  CG   ASP  1226     3.067 -18.827  52.983  1.00 15.38
ATOM   8186  OD1  ASP  1226     2.953 -20.064  53.099  1.00 14.85
ATOM   8187  OD2  ASP  1226     2.912 -18.025  53.933  1.00 15.68
ATOM   8188  C    ASP  1226     1.771 -19.749  50.435  1.00 14.71
ATOM   8189  O    ASP  1226     0.672 -20.113  50.864  1.00 13.48
ATOM   8190  N    TYR  1227     2.604 -20.548  49.780  1.00 13.68
```

```
ATOM   8191   CA   TYR   1227      2.312 -21.944   49.490   1.00 12.77
ATOM   8192   CB   TYR   1227      3.454 -22.526   48.657   1.00 13.53
ATOM   8193   CG   TYR   1227      3.407 -24.026   48.496   1.00 14.63
ATOM   8194   CD1  TYR   1227      2.642 -24.611   47.487   1.00 15.74
ATOM   8195   CE1  TYR   1227      2.594 -25.990   47.324   1.00 16.62
ATOM   8196   CD2  TYR   1227      4.128 -24.864   49.351   1.00 17.93
ATOM   8197   CE2  TYR   1227      4.087 -26.250   49.198   1.00 16.82
ATOM   8198   CZ   TYR   1227      3.325 -26.805   48.188   1.00 19.67
ATOM   8199   OH   TYR   1227      3.296 -28.172   48.016   1.00 20.34
ATOM   8200   C    TYR   1227      2.104 -22.826   50.721   1.00 14.61
ATOM   8201   O    TYR   1227      1.169 -23.631   50.770   1.00 13.84
ATOM   8202   N    SER   1228      2.985 -22.677   51.704   1.00 15.14
ATOM   8203   CA   SER   1228      2.932 -23.488   52.915   1.00 17.24
ATOM   8204   CB   SER   1228      4.115 -23.150   53.821   1.00 17.68
ATOM   8205   OG   SER   1228      5.330 -23.536   53.206   1.00 20.49
ATOM   8206   C    SER   1228      1.637 -23.402   53.704   1.00 16.77
ATOM   8207   O    SER   1228      1.012 -24.425   53.989   1.00 17.76
ATOM   8208   N    PHE   1229      1.233 -22.194   54.070   1.00 17.16
ATOM   8209   CA   PHE   1229     -0.001 -22.054   54.822   1.00 16.83
ATOM   8210   CB   PHE   1229     -0.100 -20.663   55.456   1.00 17.59
ATOM   8211   CG   PHE   1229      0.713 -20.521   56.714   1.00 17.48
ATOM   8212   CD1  PHE   1229      1.969 -19.927   56.690   1.00 19.55
ATOM   8213   CD2  PHE   1229      0.239 -21.041   57.916   1.00 20.98
ATOM   8214   CE1  PHE   1229      2.749 -19.852   57.844   1.00 19.23
ATOM   8215   CE2  PHE   1229      1.009 -20.974   59.076   1.00 21.94
ATOM   8216   CZ   PHE   1229      2.267 -20.378   59.038   1.00 20.88
ATOM   8217   C    PHE   1229     -1.226 -22.352   53.965   1.00 16.51
ATOM   8218   O    PHE   1229     -2.190 -22.929   54.452   1.00 16.61
ATOM   8219   N    ALA   1230     -1.198 -21.972   52.691   1.00 15.96
ATOM   8220   CA   ALA   1230     -2.340 -22.247   51.822   1.00 17.17
ATOM   8221   CB   ALA   1230     -2.103 -21.654   50.425   1.00 15.08
ATOM   8222   C    ALA   1230     -2.576 -23.755   51.723   1.00 17.32
ATOM   8223   O    ALA   1230     -3.715 -24.216   51.757   1.00 18.17
ATOM   8224   N    LYS   1231     -1.493 -24.518   51.600   1.00 17.85
ATOM   8225   CA   LYS   1231     -1.577 -25.971   51.493   1.00 18.56
ATOM   8226   CB   LYS   1231     -0.186 -26.546   51.201   1.00 19.63
ATOM   8227   CG   LYS   1231     -0.100 -28.073   51.122   1.00 23.84
ATOM   8228   CD   LYS   1231     -0.869 -28.632   49.940   1.00 29.01
ATOM   8229   CE   LYS   1231     -0.484 -30.086   49.634   1.00 31.79
ATOM   8230   NZ   LYS   1231     -0.862 -31.058   50.706   1.00 35.95
ATOM   8231   C    LYS   1231     -2.127 -26.564   52.789   1.00 17.93
ATOM   8232   O    LYS   1231     -2.990 -27.445   52.767   1.00 19.83
ATOM   8233   N    LEU   1232     -1.626 -26.072   53.916   1.00 19.47
ATOM   8234   CA   LEU   1232     -2.063 -26.557   55.219   1.00 18.49
ATOM   8235   CB   LEU   1232     -1.265 -25.861   56.324   1.00 20.15
ATOM   8236   CG   LEU   1232     -1.474 -26.366   57.758   1.00 20.23
ATOM   8237   CD1  LEU   1232     -0.235 -26.105   58.581   1.00 20.74
ATOM   8238   CD2  LEU   1232     -2.691 -25.670   58.358   1.00 20.65
ATOM   8239   C    LEU   1232     -3.566 -26.318   55.394   1.00 19.99
ATOM   8240   O    LEU   1232     -4.311 -27.227   55.777   1.00 19.78
ATOM   8241   N    PHE   1233     -4.013 -25.102   55.095   1.00 18.10
ATOM   8242   CA   PHE   1233     -5.430 -24.775   55.222   1.00 20.73
ATOM   8243   CB   PHE   1233     -5.701 -23.309   54.844   1.00 18.29
ATOM   8244   CG   PHE   1233     -4.957 -22.306   55.680   1.00 18.77
ATOM   8245   CD1  PHE   1233     -4.606 -22.591   56.996   1.00 18.49
ATOM   8246   CD2  PHE   1233     -4.628 -21.061   55.156   1.00 17.61
ATOM   8247   CE1  PHE   1233     -3.940 -21.652   57.769   1.00 17.42
ATOM   8248   CE2  PHE   1233     -3.961 -20.117   55.926   1.00 15.70
ATOM   8249   CZ   PHE   1233     -3.618 -20.413   57.233   1.00 17.50
ATOM   8250   C    PHE   1233     -6.278 -25.676   54.336   1.00 21.36
ATOM   8251   O    PHE   1233     -7.299 -26.215   54.775   1.00 22.69
ATOM   8252   N    ALA   1234     -5.859 -25.840   53.084   1.00 21.60
ATOM   8253   CA   ALA   1234     -6.601 -26.679   52.147   1.00 21.61
ATOM   8254   CB   ALA   1234     -5.960 -26.612   50.758   1.00 21.86
ATOM   8255   C    ALA   1234     -6.709 -28.133   52.612   1.00 23.65
ATOM   8256   O    ALA   1234     -7.759 -28.758   52.460   1.00 19.72
ATOM   8257   N    ASP   1235     -5.634 -28.675   53.179   1.00 23.15
ATOM   8258   CA   ASP   1235     -5.674 -30.061   53.646   1.00 26.64
ATOM   8259   CB   ASP   1235     -4.264 -30.577   53.973   1.00 26.19
ATOM   8260   CG   ASP   1235     -3.330 -30.562   52.767   1.00 30.30
ATOM   8261   OD1  ASP   1235     -3.758 -30.941   51.657   1.00 29.31
ATOM   8262   OD2  ASP   1235     -2.153 -30.185   52.941   1.00 30.67
ATOM   8263   C    ASP   1235     -6.561 -30.216   54.884   1.00 25.67
ATOM   8264   O    ASP   1235     -6.896 -31.333   55.275   1.00 27.41
ATOM   8265   N    GLU   1236     -6.935 -29.098   55.500   1.00 26.80
ATOM   8266   CA   GLU   1236     -7.779 -29.131   56.693   1.00 28.17
ATOM   8267   CB   GLU   1236     -7.236 -28.167   57.749   1.00 28.31
```

```
ATOM   8268  CG   GLU  1236     -5.900 -28.583  58.322  1.00 30.31
ATOM   8269  CD   GLU  1236     -5.947 -29.977  58.913  1.00 30.97
ATOM   8270  OE1  GLU  1236     -6.872 -30.252  59.709  1.00 32.20
ATOM   8271  OE2  GLU  1236     -5.066 -30.797  58.587  1.00 34.13
ATOM   8272  C    GLU  1236     -9.242 -28.805  56.407  1.00 29.14
ATOM   8273  O    GLU  1236    -10.098 -28.956  57.277  1.00 29.70
ATOM   8274  N    GLY  1237     -9.531 -28.348  55.194  1.00 28.96
ATOM   8275  CA   GLY  1237    -10.908 -28.032  54.863  1.00 30.43
ATOM   8276  C    GLY  1237    -11.165 -26.570  54.567  1.00 29.93
ATOM   8277  O    GLY  1237    -12.165 -26.248  53.937  1.00 32.59
ATOM   8278  N    LEU  1238    -10.286 -25.684  55.033  1.00 28.83
ATOM   8279  CA   LEU  1238    -10.449 -24.257  54.771  1.00 28.65
ATOM   8280  CB   LEU  1238     -9.434 -23.438  55.568  1.00 28.60
ATOM   8281  CG   LEU  1238     -9.946 -22.829  56.866  1.00 30.97
ATOM   8282  CD1  LEU  1238     -8.833 -22.052  57.548  1.00 29.17
ATOM   8283  CD2  LEU  1238    -11.130 -21.918  56.559  1.00 30.61
ATOM   8284  C    LEU  1238    -10.225 -24.039  53.283  1.00 26.94
ATOM   8285  O    LEU  1238     -9.085 -23.949  52.835  1.00 27.39
ATOM   8286  N    ASN  1239    -11.313 -23.948  52.523  1.00 24.94
ATOM   8287  CA   ASN  1239    -11.206 -23.782  51.080  1.00 24.45
ATOM   8288  CB   ASN  1239    -12.093 -24.803  50.369  1.00 26.67
ATOM   8289  CG   ASN  1239    -11.838 -26.213  50.844  1.00 29.98
ATOM   8290  OD1  ASN  1239    -10.690 -26.664  50.903  1.00 31.35
ATOM   8291  ND2  ASN  1239    -12.905 -26.924  51.188  1.00 33.26
ATOM   8292  C    ASN  1239    -11.527 -22.391  50.573  1.00 22.89
ATOM   8293  O    ASN  1239    -11.763 -22.201  49.382  1.00 24.50
ATOM   8294  N    VAL  1240    -11.545 -21.420  51.475  1.00 21.81
ATOM   8295  CA   VAL  1240    -11.806 -20.039  51.086  1.00 19.80
ATOM   8296  CB   VAL  1240    -13.137 -19.519  51.629  1.00 20.14
ATOM   8297  CG1  VAL  1240    -13.358 -18.098  51.141  1.00 18.87
ATOM   8298  CG2  VAL  1240    -14.263 -20.413  51.176  1.00 17.75
ATOM   8299  C    VAL  1240    -10.691 -19.190  51.663  1.00 19.46
ATOM   8300  O    VAL  1240    -10.632 -18.960  52.868  1.00 18.98
ATOM   8301  N    MET  1241     -9.811 -18.719  50.788  1.00 18.30
ATOM   8302  CA   MET  1241     -8.678 -17.922  51.210  1.00 17.27
ATOM   8303  CB   MET  1241     -7.382 -18.672  50.927  1.00 17.64
ATOM   8304  CG   MET  1241     -7.204 -19.922  51.769  1.00 18.74
ATOM   8305  SD   MET  1241     -5.840 -20.926  51.216  1.00 19.35
ATOM   8306  CE   MET  1241     -6.619 -22.510  51.062  1.00 19.09
ATOM   8307  C    MET  1241     -8.629 -16.583  50.521  1.00 16.92
ATOM   8308  O    MET  1241     -8.975 -16.469  49.348  1.00 17.62
ATOM   8309  N    LEU  1242     -8.171 -15.571  51.249  1.00 16.36
ATOM   8310  CA   LEU  1242     -8.069 -14.233  50.694  1.00 17.87
ATOM   8311  CB   LEU  1242     -8.950 -13.270  51.501  1.00 19.81
ATOM   8312  CG   LEU  1242     -9.047 -11.757  51.253  1.00 23.91
ATOM   8313  CD1  LEU  1242     -7.919 -11.072  51.987  1.00 25.91
ATOM   8314  CD2  LEU  1242     -9.038 -11.402  49.770  1.00 21.85
ATOM   8315  C    LEU  1242     -6.625 -13.759  50.682  1.00 16.01
ATOM   8316  O    LEU  1242     -5.911 -13.860  51.679  1.00 14.63
ATOM   8317  N    VAL  1243     -6.202 -13.259  49.529  1.00 16.58
ATOM   8318  CA   VAL  1243     -4.859 -12.724  49.381  1.00 15.62
ATOM   8319  CB   VAL  1243     -4.233 -13.152  48.046  1.00 15.84
ATOM   8320  CG1  VAL  1243     -2.801 -12.644  47.954  1.00 15.84
ATOM   8321  CG2  VAL  1243     -4.274 -14.668  47.923  1.00 17.35
ATOM   8322  C    VAL  1243     -5.086 -11.223  49.413  1.00 15.28
ATOM   8323  O    VAL  1243     -5.272 -10.590  48.376  1.00 14.94
ATOM   8324  N    GLY  1244     -5.085 -10.662  50.622  1.00 16.14
ATOM   8325  CA   GLY  1244     -5.351  -9.244  50.780  1.00 18.27
ATOM   8326  C    GLY  1244     -4.156  -8.347  50.980  1.00 16.28
ATOM   8327  O    GLY  1244     -3.061  -8.815  51.306  1.00 14.05
ATOM   8328  N    ASP  1245     -4.368  -7.046  50.798  1.00 17.20
ATOM   8329  CA   ASP  1245     -3.276  -6.105  50.957  1.00 17.71
ATOM   8330  CB   ASP  1245     -3.620  -4.728  50.369  1.00 17.04
ATOM   8331  CG   ASP  1245     -4.889  -4.121  50.952  1.00 16.86
ATOM   8332  OD1  ASP  1245     -5.415  -4.640  51.951  1.00 16.51
ATOM   8333  OD2  ASP  1245     -5.338  -3.111  50.384  1.00 17.00
ATOM   8334  C    ASP  1245     -2.837  -5.978  52.404  1.00 16.69
ATOM   8335  O    ASP  1245     -1.944  -5.202  52.715  1.00 15.57
ATOM   8336  N    SER  1246     -3.471  -6.736  53.291  1.00 16.51
ATOM   8337  CA   SER  1246     -3.050  -6.722  54.685  1.00 18.08
ATOM   8338  CB   SER  1246     -3.963  -7.606  55.539  1.00 17.32
ATOM   8339  OG   SER  1246     -4.087  -8.920  55.004  1.00 20.35
ATOM   8340  C    SER  1246     -1.617  -7.262  54.687  1.00 17.95
ATOM   8341  O    SER  1246     -0.865  -7.062  55.642  1.00 18.43
ATOM   8342  N    LEU  1247     -1.234  -7.943  53.606  1.00 17.78
ATOM   8343  CA   LEU  1247      0.131  -8.473  53.503  1.00 17.35
ATOM   8344  CB   LEU  1247      0.302  -9.318  52.225  1.00 16.63
```

```
ATOM   8345  CG  LEU 1247      0.200  -8.648  50.854  1.00 14.50
ATOM   8346  CD1 LEU 1247      1.513  -7.956  50.524  1.00 14.50
ATOM   8347  CD2 LEU 1247     -0.135  -9.688  49.777  1.00 14.80
ATOM   8348  C   LEU 1247      1.143  -7.323  53.521  1.00 15.79
ATOM   8349  O   LEU 1247      2.330  -7.520  53.796  1.00 14.98
ATOM   8350  N   GLY 1248      0.682  -6.116  53.212  1.00 13.56
ATOM   8351  CA  GLY 1248      1.584  -4.978  53.226  1.00 13.97
ATOM   8352  C   GLY 1248      2.119  -4.763  54.624  1.00 15.47
ATOM   8353  O   GLY 1248      3.228  -4.261  54.820  1.00 16.88
ATOM   8354  N   MET 1249      1.325  -5.162  55.608  1.00 14.33
ATOM   8355  CA  MET 1249      1.719  -5.005  56.996  1.00 16.01
ATOM   8356  CB  MET 1249      0.513  -4.502  57.800  1.00 19.46
ATOM   8357  CG  MET 1249      0.018  -3.144  57.322  1.00 21.69
ATOM   8358  SD  MET 1249     -1.516  -2.566  58.097  1.00 26.00
ATOM   8359  CE  MET 1249     -0.965  -2.281  59.756  1.00 27.35
ATOM   8360  C   MET 1249      2.290  -6.289  57.602  1.00 16.59
ATOM   8361  O   MET 1249      3.417  -6.305  58.096  1.00 14.81
ATOM   8362  N   THR 1250      1.525  -7.369  57.530  1.00 16.12
ATOM   8363  CA  THR 1250      1.946  -8.636  58.100  1.00 18.02
ATOM   8364  CB  THR 1250      0.751  -9.598  58.167  1.00 19.93
ATOM   8365  OG1 THR 1250      1.098 -10.759  58.930  1.00 25.56
ATOM   8366  CG2 THR 1250      0.341 -10.019  56.777  1.00 21.14
ATOM   8367  C   THR 1250      3.111  -9.311  57.368  1.00 16.42
ATOM   8368  O   THR 1250      3.920 -10.011  57.982  1.00 17.25
ATOM   8369  N   VAL 1251      3.207  -9.114  56.060  1.00 14.38
ATOM   8370  CA  VAL 1251      4.295  -9.729  55.306  1.00 14.53
ATOM   8371  CB  VAL 1251      3.792 -10.309  53.953  1.00 15.45
ATOM   8372  CG1 VAL 1251      4.975 -10.833  53.133  1.00 12.75
ATOM   8373  CG2 VAL 1251      2.796 -11.428  54.210  1.00 15.08
ATOM   8374  C   VAL 1251      5.419  -8.732  55.039  1.00 14.56
ATOM   8375  O   VAL 1251      6.573  -8.978  55.395  1.00 16.60
ATOM   8376  N   GLN 1252      5.077  -7.598  54.437  1.00 11.43
ATOM   8377  CA  GLN 1252      6.064  -6.574  54.097  1.00 13.81
ATOM   8378  CB  GLN 1252      5.493  -5.649  53.026  1.00 14.06
ATOM   8379  CG  GLN 1252      4.925  -6.404  51.832  1.00 15.86
ATOM   8380  CD  GLN 1252      4.458  -5.482  50.727  1.00 14.76
ATOM   8381  OE1 GLN 1252      4.178  -4.304  50.960  1.00 14.09
ATOM   8382  NE2 GLN 1252      4.358  -6.019  49.513  1.00 12.71
ATOM   8383  C   GLN 1252      6.581  -5.742  55.270  1.00 14.83
ATOM   8384  O   GLN 1252      7.726  -5.291  55.249  1.00 15.58
ATOM   8385  N   GLY 1253      5.739  -5.523  56.272  1.00 15.09
ATOM   8386  CA  GLY 1253      6.165  -4.760  57.434  1.00 15.66
ATOM   8387  C   GLY 1253      5.888  -3.269  57.397  1.00 17.26
ATOM   8388  O   GLY 1253      6.480  -2.501  58.163  1.00 18.18
ATOM   8389  N   HIS 1254      5.001  -2.838  56.509  1.00 17.51
ATOM   8390  CA  HIS 1254      4.671  -1.420  56.429  1.00 18.70
ATOM   8391  CB  HIS 1254      4.126  -1.065  55.045  1.00 19.45
ATOM   8392  CG  HIS 1254      5.119  -1.251  53.945  1.00 19.97
ATOM   8393  CD2 HIS 1254      5.122  -2.083  52.876  1.00 19.30
ATOM   8394  ND1 HIS 1254      6.287  -0.522  53.868  1.00 18.30
ATOM   8395  CE1 HIS 1254      6.965  -0.896  52.798  1.00 22.21
ATOM   8396  NE2 HIS 1254      6.280  -1.841  52.178  1.00 21.62
ATOM   8397  C   HIS 1254      3.634  -1.094  57.488  1.00 18.59
ATOM   8398  O   HIS 1254      2.986  -1.996  58.025  1.00 19.51
ATOM   8399  N   ASP 1255      3.487   0.192  57.788  1.00 19.71
ATOM   8400  CA  ASP 1255      2.530   0.651  58.795  1.00 23.34
ATOM   8401  CB  ASP 1255      2.943   2.030  59.331  1.00 27.63
ATOM   8402  CG  ASP 1255      3.048   3.077  58.239  1.00 29.81
ATOM   8403  OD1 ASP 1255      2.101   3.214  57.443  1.00 33.96
ATOM   8404  OD2 ASP 1255      4.082   3.776  58.178  1.00 37.20
ATOM   8405  C   ASP 1255      1.096   0.712  58.272  1.00 21.29
ATOM   8406  O   ASP 1255      0.156   0.883  59.047  1.00 21.48
ATOM   8407  N   SER 1256      0.931   0.587  56.958  1.00 19.07
ATOM   8408  CA  SER 1256     -0.398   0.609  56.339  1.00 16.19
ATOM   8409  CB  SER 1256     -0.761   2.024  55.869  1.00 14.13
ATOM   8410  OG  SER 1256      0.016   2.418  54.748  1.00 13.20
ATOM   8411  C   SER 1256     -0.394  -0.339  55.141  1.00 16.00
ATOM   8412  O   SER 1256      0.628  -0.956  54.838  1.00 16.64
ATOM   8413  N   THR 1257     -1.526  -0.444  54.453  1.00 15.54
ATOM   8414  CA  THR 1257     -1.616  -1.327  53.296  1.00 13.85
ATOM   8415  CB  THR 1257     -3.001  -2.009  53.214  1.00 14.68
ATOM   8416  OG1 THR 1257     -4.005  -1.020  52.942  1.00 13.16
ATOM   8417  CG2 THR 1257     -3.333  -2.708  54.518  1.00 14.28
ATOM   8418  C   THR 1257     -1.383  -0.596  51.978  1.00 14.73
ATOM   8419  O   THR 1257     -1.260  -1.232  50.931  1.00 14.37
ATOM   8420  N   LEU 1258     -1.296   0.731  52.028  1.00 11.56
ATOM   8421  CA  LEU 1258     -1.116   1.522  50.810  1.00 14.62
```

```
ATOM   8422  CB   LEU  1258      -1.059    3.022   51.151   1.00 14.76
ATOM   8423  CG   LEU  1258      -2.415    3.708   51.387   1.00 18.81
ATOM   8424  CD1  LEU  1258      -3.037    3.193   52.689   1.00 18.31
ATOM   8425  CD2  LEU  1258      -2.225    5.211   51.451   1.00 17.89
ATOM   8426  C    LEU  1258       0.049    1.172   49.873   1.00 13.86
ATOM   8427  O    LEU  1258      -0.099    1.248   48.655   1.00 13.08
ATOM   8428  N    PRO  1259       1.215    0.790   50.419   1.00 15.27
ATOM   8429  CD   PRO  1259       1.610    0.817   51.836   1.00 16.92
ATOM   8430  CA   PRO  1259       2.355    0.448   49.562   1.00 13.94
ATOM   8431  CB   PRO  1259       3.521    0.372   50.544   1.00 17.82
ATOM   8432  CG   PRO  1259       2.850   -0.036   51.830   1.00 22.73
ATOM   8433  C    PRO  1259       2.208   -0.827   48.733   1.00 13.69
ATOM   8434  O    PRO  1259       2.956   -1.020   47.779   1.00 11.25
ATOM   8435  N    VAL  1260       1.254   -1.689   49.081   1.00 12.02
ATOM   8436  CA   VAL  1260       1.061   -2.932   48.330   1.00 12.65
ATOM   8437  CB   VAL  1260      -0.025   -3.825   48.981   1.00 12.45
ATOM   8438  CG1  VAL  1260      -0.258   -5.057   48.132   1.00 11.57
ATOM   8439  CG2  VAL  1260       0.401   -4.235   50.391   1.00  9.00
ATOM   8440  C    VAL  1260       0.659   -2.631   46.892   1.00 12.91
ATOM   8441  O    VAL  1260      -0.252   -1.834   46.638   1.00 12.38
ATOM   8442  N    THR  1261       1.325   -3.281   45.941   1.00 14.02
ATOM   8443  CA   THR  1261       1.019   -3.060   44.529   1.00 13.63
ATOM   8444  CB   THR  1261       2.326   -2.816   43.724   1.00 18.67
ATOM   8445  OG1  THR  1261       3.072   -1.749   44.337   1.00 18.95
ATOM   8446  CG2  THR  1261       2.010   -2.410   42.285   1.00 22.02
ATOM   8447  C    THR  1261       0.268   -4.259   43.930   1.00 12.64
ATOM   8448  O    THR  1261       0.115   -5.289   44.572   1.00 11.51
ATOM   8449  N    VAL  1262      -0.197   -4.108   42.697   1.00 10.72
ATOM   8450  CA   VAL  1262      -0.906   -5.181   42.017   1.00 11.46
ATOM   8451  CB   VAL  1262      -1.484   -4.682   40.675   1.00 10.61
ATOM   8452  CG1  VAL  1262      -2.069   -5.852   39.875   1.00 10.47
ATOM   8453  CG2  VAL  1262      -2.576   -3.631   40.956   1.00 10.70
ATOM   8454  C    VAL  1262       0.068   -6.339   41.790   1.00 11.29
ATOM   8455  O    VAL  1262      -0.310   -7.511   41.895   1.00 11.57
ATOM   8456  N    ALA  1263       1.324   -6.006   41.497   1.00 12.19
ATOM   8457  CA   ALA  1263       2.339   -7.031   41.275   1.00 11.44
ATOM   8458  CB   ALA  1263       3.673   -6.389   40.842   1.00 11.79
ATOM   8459  C    ALA  1263       2.531   -7.843   42.556   1.00 11.93
ATOM   8460  O    ALA  1263       2.724   -9.065   42.505   1.00 10.47
ATOM   8461  N    ASP  1264       2.491   -7.172   43.708   1.00  9.71
ATOM   8462  CA   ASP  1264       2.648   -7.883   44.981   1.00 13.19
ATOM   8463  CB   ASP  1264       2.646   -6.916   46.177   1.00 12.97
ATOM   8464  CG   ASP  1264       3.782   -5.904   46.135   1.00 15.35
ATOM   8465  OD1  ASP  1264       4.833   -6.206   45.548   1.00 13.99
ATOM   8466  OD2  ASP  1264       3.635   -4.805   46.713   1.00 12.70
ATOM   8467  C    ASP  1264       1.498   -8.873   45.157   1.00 11.29
ATOM   8468  O    ASP  1264       1.709  -10.036   45.488   1.00 12.23
ATOM   8469  N    ILE  1265       0.279   -8.406   44.920   1.00 10.36
ATOM   8470  CA   ILE  1265      -0.886   -9.263   45.053   1.00  9.25
ATOM   8471  CB   ILE  1265      -2.194   -8.492   44.733   1.00  8.35
ATOM   8472  CG2  ILE  1265      -3.381   -9.460   44.721   1.00 10.20
ATOM   8473  CG1  ILE  1265      -2.436   -7.394   45.763   1.00 10.86
ATOM   8474  CD1  ILE  1265      -2.621   -7.897   47.180   1.00 13.04
ATOM   8475  C    ILE  1265      -0.782  -10.474   44.125   1.00 10.11
ATOM   8476  O    ILE  1265      -1.066  -11.591   44.539   1.00 10.76
ATOM   8477  N    ALA  1266      -0.373  -10.259   42.878   1.00 11.37
ATOM   8478  CA   ALA  1266      -0.269  -11.361   41.915   1.00 10.83
ATOM   8479  CB   ALA  1266      -0.007  -10.804   40.512   1.00 10.92
ATOM   8480  C    ALA  1266       0.801  -12.398   42.299   1.00 10.56
ATOM   8481  O    ALA  1266       0.655  -13.606   42.048   1.00 10.01
ATOM   8482  N    TYR  1267       1.882  -11.919   42.905   1.00  9.93
ATOM   8483  CA   TYR  1267       2.978  -12.783   43.360   1.00  8.50
ATOM   8484  CB   TYR  1267       4.122  -11.912   43.911   1.00  9.28
ATOM   8485  CG   TYR  1267       5.236  -12.676   44.598   1.00  9.52
ATOM   8486  CD1  TYR  1267       6.098  -13.493   43.879   1.00 11.95
ATOM   8487  CE1  TYR  1267       7.142  -14.176   44.509   1.00 12.07
ATOM   8488  CD2  TYR  1267       5.436  -12.559   45.972   1.00 12.37
ATOM   8489  CE2  TYR  1267       6.475  -13.237   46.615   1.00 12.84
ATOM   8490  CZ   TYR  1267       7.321  -14.039   45.875   1.00 14.28
ATOM   8491  OH   TYR  1267       8.365  -14.691   46.510   1.00 13.09
ATOM   8492  C    TYR  1267       2.461  -13.732   44.441   1.00  9.24
ATOM   8493  O    TYR  1267       2.636  -14.960   44.368   1.00  7.23
ATOM   8494  N    HIS  1268       1.808  -13.162   45.448   1.00 10.07
ATOM   8495  CA   HIS  1268       1.277  -13.968   46.549   1.00 11.40
ATOM   8496  CB   HIS  1268       0.899  -13.042   47.717   1.00 10.91
ATOM   8497  CG   HIS  1268       2.093  -12.471   48.425   1.00 10.67
ATOM   8498  CD2  HIS  1268       2.720  -11.277   48.299   1.00 12.54
```

```
ATOM   8499  ND1 HIS  1268      2.850 -13.207  49.310  1.00  9.83
ATOM   8500  CE1 HIS  1268      3.896 -12.495  49.694  1.00 12.36
ATOM   8501  NE2 HIS  1268      3.842 -11.321  49.095  1.00 11.55
ATOM   8502  C   HIS  1268      0.099 -14.836  46.096  1.00 12.08
ATOM   8503  O   HIS  1268     -0.104 -15.933  46.610  1.00 10.75
ATOM   8504  N   THR  1269     -0.655 -14.351  45.112  1.00 11.50
ATOM   8505  CA  THR  1269     -1.794 -15.094  44.591  1.00 11.48
ATOM   8506  CB  THR  1269     -2.590 -14.224  43.602  1.00 11.59
ATOM   8507  OG1 THR  1269     -3.215 -13.149  44.319  1.00 12.48
ATOM   8508  CG2 THR  1269     -3.651 -15.039  42.884  1.00 13.07
ATOM   8509  C   THR  1269     -1.340 -16.386  43.909  1.00 10.67
ATOM   8510  O   THR  1269     -1.928 -17.443  44.119  1.00 13.58
ATOM   8511  N   ALA  1270     -0.292 -16.301  43.098  1.00  8.94
ATOM   8512  CA  ALA  1270      0.228 -17.478  42.414  1.00 10.29
ATOM   8513  CB  ALA  1270      1.366 -17.076  41.465  1.00 11.72
ATOM   8514  C   ALA  1270      0.737 -18.492  43.437  1.00 10.90
ATOM   8515  O   ALA  1270      0.556 -19.701  43.269  1.00 12.02
ATOM   8516  N   ALA  1271      1.379 -17.998  44.495  1.00 11.07
ATOM   8517  CA  ALA  1271      1.924 -18.878  45.534  1.00 11.19
ATOM   8518  CB  ALA  1271      2.733 -18.064  46.541  1.00 10.42
ATOM   8519  C   ALA  1271      0.816 -19.642  46.251  1.00 11.93
ATOM   8520  O   ALA  1271      0.912 -20.849  46.458  1.00  9.16
ATOM   8521  N   VAL  1272     -0.228 -18.922  46.645  1.00 12.77
ATOM   8522  CA  VAL  1272     -1.356 -19.528  47.331  1.00 12.55
ATOM   8523  CB  VAL  1272     -2.339 -18.436  47.812  1.00 10.99
ATOM   8524  CG1 VAL  1272     -3.613 -19.062  48.365  1.00 13.11
ATOM   8525  CG2 VAL  1272     -1.660 -17.597  48.893  1.00 10.80
ATOM   8526  C   VAL  1272     -2.063 -20.535  46.436  1.00 12.93
ATOM   8527  O   VAL  1272     -2.442 -21.624  46.882  1.00 13.02
ATOM   8528  N   ARG  1273     -2.226 -20.191  45.163  1.00 12.86
ATOM   8529  CA  ARG  1273     -2.883 -21.109  44.236  1.00 13.02
ATOM   8530  CB  ARG  1273     -3.058 -20.457  42.862  1.00 13.85
ATOM   8531  CG  ARG  1273     -3.681 -21.381  41.817  1.00 15.25
ATOM   8532  CD  ARG  1273     -5.033 -21.909  42.266  1.00 15.44
ATOM   8533  NE  ARG  1273     -6.101 -20.917  42.171  1.00 15.46
ATOM   8534  CZ  ARG  1273     -7.292 -21.060  42.742  1.00 16.08
ATOM   8535  NH1 ARG  1273     -7.558 -22.151  43.454  1.00 14.02
ATOM   8536  NH2 ARG  1273     -8.218 -20.120  42.592  1.00 14.57
ATOM   8537  C   ARG  1273     -2.108 -22.410  44.088  1.00 14.78
ATOM   8538  O   ARG  1273     -2.710 -23.466  43.933  1.00 15.68
ATOM   8539  N   ARG  1274     -0.777 -22.337  44.123  1.00 13.54
ATOM   8540  CA  ARG  1274      0.030 -23.542  44.003  1.00 15.46
ATOM   8541  CB  ARG  1274      1.518 -23.195  43.949  1.00 14.07
ATOM   8542  CG  ARG  1274      1.922 -22.395  42.728  1.00 17.35
ATOM   8543  CD  ARG  1274      3.431 -22.383  42.532  1.00 16.78
ATOM   8544  NE  ARG  1274      3.792 -21.497  41.436  1.00 20.34
ATOM   8545  CZ  ARG  1274      4.066 -20.203  41.573  1.00 20.54
ATOM   8546  NH1 ARG  1274      4.038 -19.634  42.772  1.00 18.45
ATOM   8547  NH2 ARG  1274      4.341 -19.468  40.502  1.00 22.65
ATOM   8548  C   ARG  1274     -0.222 -24.468  45.185  1.00 16.23
ATOM   8549  O   ARG  1274     -0.225 -25.693  45.043  1.00 16.53
ATOM   8550  N   GLY  1275     -0.425 -23.872  46.353  1.00 15.34
ATOM   8551  CA  GLY  1275     -0.671 -24.654  47.554  1.00 16.35
ATOM   8552  C   GLY  1275     -2.105 -25.138  47.686  1.00 17.09
ATOM   8553  O   GLY  1275     -2.363 -26.148  48.338  1.00 17.88
ATOM   8554  N   ALA  1276     -3.042 -24.417  47.077  1.00 15.42
ATOM   8555  CA  ALA  1276     -4.457 -24.785  47.141  1.00 15.88
ATOM   8556  CB  ALA  1276     -5.158 -23.921  48.170  1.00 12.41
ATOM   8557  C   ALA  1276     -5.122 -24.623  45.770  1.00 18.03
ATOM   8558  O   ALA  1276     -5.898 -23.690  45.546  1.00 17.23
ATOM   8559  N   PRO  1277     -4.843 -25.550  44.841  1.00 19.05
ATOM   8560  CD  PRO  1277     -4.009 -26.751  45.029  1.00 21.91
ATOM   8561  CA  PRO  1277     -5.402 -25.507  43.486  1.00 20.89
ATOM   8562  CB  PRO  1277     -4.692 -26.665  42.784  1.00 21.37
ATOM   8563  CG  PRO  1277     -4.452 -27.631  43.890  1.00 23.97
ATOM   8564  C   PRO  1277     -6.922 -25.574  43.340  1.00 21.51
ATOM   8565  O   PRO  1277     -7.458 -25.173  42.306  1.00 21.21
ATOM   8566  N   ASN  1278     -7.615 -26.049  44.371  1.00 20.14
ATOM   8567  CA  ASN  1278     -9.065 -26.171  44.297  1.00 21.69
ATOM   8568  CB  ASN  1278     -9.483 -27.622  44.567  1.00 25.95
ATOM   8569  CG  ASN  1278     -8.833 -28.600  43.610  1.00 26.75
ATOM   8570  OD1 ASN  1278     -8.927 -28.446  42.393  1.00 30.57
ATOM   8571  ND2 ASN  1278     -8.173 -29.612  44.154  1.00 29.13
ATOM   8572  C   ASN  1278     -9.823 -25.245  45.235  1.00 21.44
ATOM   8573  O   ASN  1278    -11.042 -25.346  45.364  1.00 20.63
ATOM   8574  N   CYS  1279     -9.112 -24.332  45.884  1.00 19.87
ATOM   8575  CA  CYS  1279     -9.763 -23.408  46.804  1.00 19.78
```

```
ATOM   8576  CB   CYS  1279     -8.749 -22.831  47.799  1.00 19.93
ATOM   8577  SG   CYS  1279     -7.738 -21.467  47.142  1.00 19.97
ATOM   8578  C    CYS  1279    -10.401 -22.245  46.055  1.00 19.66
ATOM   8579  O    CYS  1279    -10.106 -22.019  44.881  1.00 18.47
ATOM   8580  N    LEU  1280    -11.294 -21.530  46.738  1.00 18.36
ATOM   8581  CA   LEU  1280    -11.924 -20.336  46.179  1.00 17.84
ATOM   8582  CB   LEU  1280    -13.296 -20.059  46.814  1.00 19.49
ATOM   8583  CG   LEU  1280    -13.960 -18.734  46.406  1.00 18.08
ATOM   8584  CD1  LEU  1280    -14.186 -18.712  44.897  1.00 19.62
ATOM   8585  CD2  LEU  1280    -15.291 -18.559  47.142  1.00 17.89
ATOM   8586  C    LEU  1280    -10.937 -19.258  46.609  1.00 17.49
ATOM   8587  O    LEU  1280    -10.763 -19.003  47.805  1.00 16.91
ATOM   8588  N    LEU  1281    -10.285 -18.634  45.636  1.00 17.29
ATOM   8589  CA   LEU  1281     -9.274 -17.630  45.930  1.00 16.61
ATOM   8590  CB   LEU  1281     -7.998 -17.969  45.147  1.00 16.66
ATOM   8591  CG   LEU  1281     -6.651 -17.406  45.628  1.00 17.44
ATOM   8592  CD1  LEU  1281     -5.524 -18.159  44.929  1.00 15.28
ATOM   8593  CD2  LEU  1281     -6.566 -15.925  45.366  1.00 21.45
ATOM   8594  C    LEU  1281     -9.692 -16.195  45.633  1.00 17.29
ATOM   8595  O    LEU  1281     -9.900 -15.825  44.475  1.00 15.84
ATOM   8596  N    LEU  1282     -9.820 -15.398  46.689  1.00 16.41
ATOM   8597  CA   LEU  1282    -10.168 -13.983  46.561  1.00 17.05
ATOM   8598  CB   LEU  1282    -11.093 -13.534  47.699  1.00 16.06
ATOM   8599  CG   LEU  1282    -12.601 -13.795  47.550  1.00 17.50
ATOM   8600  CD1  LEU  1282    -12.847 -15.285  47.468  1.00 17.75
ATOM   8601  CD2  LEU  1282    -13.358 -13.176  48.732  1.00 18.80
ATOM   8602  C    LEU  1282     -8.876 -13.169  46.635  1.00 17.94
ATOM   8603  O    LEU  1282     -8.030 -13.425  47.487  1.00 22.05
ATOM   8604  N    ALA  1283     -8.712 -12.199  45.744  1.00 14.13
ATOM   8605  CA   ALA  1283     -7.519 -11.363  45.771  1.00 14.02
ATOM   8606  CB   ALA  1283     -6.694 -11.594  44.532  1.00 11.25
ATOM   8607  C    ALA  1283     -7.940  -9.903  45.855  1.00 12.74
ATOM   8608  O    ALA  1283     -8.862  -9.479  45.157  1.00 12.53
ATOM   8609  N    ASP  1284     -7.287  -9.131  46.719  1.00 13.81
ATOM   8610  CA   ASP  1284     -7.623  -7.718  46.827  1.00 14.31
ATOM   8611  CB   ASP  1284     -7.075  -7.095  48.113  1.00 17.63
ATOM   8612  CG   ASP  1284     -7.972  -7.298  49.310  1.00 19.26
ATOM   8613  OD1  ASP  1284     -9.202  -7.418  49.152  1.00 17.82
ATOM   8614  OD2  ASP  1284     -7.428  -7.301  50.430  1.00 23.10
ATOM   8615  C    ASP  1284     -7.003  -6.912  45.702  1.00 15.99
ATOM   8616  O    ASP  1284     -5.930  -7.256  45.202  1.00 14.33
ATOM   8617  N    LEU  1285     -7.688  -5.849  45.290  1.00 13.28
ATOM   8618  CA   LEU  1285     -7.104  -4.917  44.335  1.00 12.51
ATOM   8619  CB   LEU  1285     -8.151  -4.287  43.418  1.00 14.13
ATOM   8620  CG   LEU  1285     -8.543  -5.157  42.218  1.00 14.99
ATOM   8621  CD1  LEU  1285     -9.420  -4.365  41.262  1.00 15.19
ATOM   8622  CD2  LEU  1285     -7.273  -5.633  41.508  1.00 15.66
ATOM   8623  C    LEU  1285     -6.616  -3.907  45.373  1.00 13.60
ATOM   8624  O    LEU  1285     -7.386  -3.463  46.225  1.00 13.40
ATOM   8625  N    PRO  1286     -5.319  -3.569  45.349  1.00 13.01
ATOM   8626  CD   PRO  1286     -4.276  -4.134  44.477  1.00 12.67
ATOM   8627  CA   PRO  1286     -4.751  -2.621  46.312  1.00 13.67
ATOM   8628  CB   PRO  1286     -3.250  -2.909  46.223  1.00 14.83
ATOM   8629  CG   PRO  1286     -3.075  -3.237  44.758  1.00 13.00
ATOM   8630  C    PRO  1286     -5.079  -1.147  46.079  1.00 13.64
ATOM   8631  O    PRO  1286     -5.772  -0.781  45.128  1.00 14.01
ATOM   8632  N    PHE  1287     -4.583  -0.311  46.983  1.00 13.42
ATOM   8633  CA   PHE  1287     -4.779   1.130  46.929  1.00 13.53
ATOM   8634  CB   PHE  1287     -3.805   1.782  47.915  1.00 15.05
ATOM   8635  CG   PHE  1287     -3.661   3.265  47.750  1.00 15.65
ATOM   8636  CD1  PHE  1287     -4.740   4.120  47.989  1.00 16.81
ATOM   8637  CD2  PHE  1287     -2.435   3.814  47.372  1.00 13.49
ATOM   8638  CE1  PHE  1287     -4.593   5.490  47.865  1.00 16.89
ATOM   8639  CE2  PHE  1287     -2.281   5.184  47.247  1.00 14.29
ATOM   8640  CZ   PHE  1287     -3.367   6.032  47.492  1.00 17.50
ATOM   8641  C    PHE  1287     -4.587   1.692  45.515  1.00 14.14
ATOM   8642  O    PHE  1287     -3.581   1.418  44.851  1.00 11.80
ATOM   8643  N    MET  1288     -5.562   2.484  45.071  1.00 13.14
ATOM   8644  CA   MET  1288     -5.555   3.110  43.751  1.00 13.99
ATOM   8645  CB   MET  1288     -4.470   4.198  43.687  1.00 15.56
ATOM   8646  CG   MET  1288     -4.792   5.333  42.709  1.00 17.83
ATOM   8647  SD   MET  1288     -6.295   6.296  43.134  1.00 16.61
ATOM   8648  CE   MET  1288     -5.573   7.644  44.077  1.00 17.67
ATOM   8649  C    MET  1288     -5.377   2.140  42.569  1.00 14.20
ATOM   8650  O    MET  1288     -4.814   2.515  41.538  1.00 14.63
ATOM   8651  N    ALA  1289     -5.840   0.901  42.704  1.00 12.49
ATOM   8652  CA   ALA  1289     -5.723  -0.046  41.596  1.00 13.64
```

```
ATOM   8653  CB   ALA  1289      -5.342  -1.438  42.112  1.00 12.98
ATOM   8654  C    ALA  1289      -7.039  -0.117  40.821  1.00 12.89
ATOM   8655  O    ALA  1289      -7.142  -0.819  39.816  1.00 13.36
ATOM   8656  N    TYR  1290      -8.045   0.623  41.276  1.00 11.64
ATOM   8657  CA   TYR  1290      -9.347   0.624  40.605  1.00 12.12
ATOM   8658  CB   TYR  1290     -10.284  -0.363  41.302  1.00 10.86
ATOM   8659  CG   TYR  1290     -10.276  -0.270  42.816  1.00 12.41
ATOM   8660  CD1  TYR  1290     -11.308   0.371  43.500  1.00 10.35
ATOM   8661  CE1  TYR  1290     -11.321   0.436  44.892  1.00 13.90
ATOM   8662  CD2  TYR  1290      -9.245  -0.844  43.563  1.00 12.59
ATOM   8663  CE2  TYR  1290      -9.242  -0.786  44.959  1.00 15.77
ATOM   8664  CZ   TYR  1290     -10.290  -0.144  45.616  1.00 16.49
ATOM   8665  OH   TYR  1290     -10.313  -0.095  46.992  1.00 16.97
ATOM   8666  C    TYR  1290      -9.946   2.029  40.593  1.00 11.80
ATOM   8667  O    TYR  1290     -11.142   2.212  40.811  1.00 12.18
ATOM   8668  N    ALA  1291      -9.095   3.009  40.310  1.00 11.23
ATOM   8669  CA   ALA  1291      -9.484   4.414  40.291  1.00 12.52
ATOM   8670  CB   ALA  1291      -8.233   5.291  40.232  1.00 13.30
ATOM   8671  C    ALA  1291     -10.425   4.748  39.141  1.00 13.87
ATOM   8672  O    ALA  1291     -11.127   5.755  39.183  1.00 15.07
ATOM   8673  N    THR  1292     -10.402   3.929  38.093  1.00 13.11
ATOM   8674  CA   THR  1292     -11.295   4.111  36.953  1.00 13.77
ATOM   8675  CB   THR  1292     -10.620   4.827  35.753  1.00 14.58
ATOM   8676  OG1  THR  1292      -9.685   3.944  35.123  1.00 13.37
ATOM   8677  CG2  THR  1292      -9.880   6.085  36.210  1.00 15.36
ATOM   8678  C    THR  1292     -11.676   2.699  36.526  1.00 13.97
ATOM   8679  O    THR  1292     -10.972   1.728  36.849  1.00 12.52
ATOM   8680  N    PRO  1293     -12.805   2.554  35.821  1.00 12.10
ATOM   8681  CD   PRO  1293     -13.854   3.557  35.555  1.00 11.83
ATOM   8682  CA   PRO  1293     -13.228   1.222  35.376  1.00 12.00
ATOM   8683  CB   PRO  1293     -14.503   1.517  34.593  1.00 11.85
ATOM   8684  CG   PRO  1293     -15.078   2.695  35.378  1.00 11.15
ATOM   8685  C    PRO  1293     -12.138   0.577  34.518  1.00 14.03
ATOM   8686  O    PRO  1293     -11.789  -0.588  34.712  1.00 15.96
ATOM   8687  N    GLU  1294     -11.592   1.351  33.585  1.00 14.44
ATOM   8688  CA   GLU  1294     -10.533   0.879  32.689  1.00 17.39
ATOM   8689  CB   GLU  1294     -10.024   2.047  31.836  1.00 20.55
ATOM   8690  CG   GLU  1294      -8.898   1.708  30.876  1.00 28.83
ATOM   8691  CD   GLU  1294      -8.043   2.922  30.527  1.00 32.90
ATOM   8692  OE1  GLU  1294      -7.124   3.253  31.311  1.00 36.01
ATOM   8693  OE2  GLU  1294      -8.301   3.553  29.479  1.00 37.17
ATOM   8694  C    GLU  1294      -9.366   0.279  33.471  1.00 16.65
ATOM   8695  O    GLU  1294      -8.904  -0.828  33.179  1.00 15.04
ATOM   8696  N    GLN  1295      -8.873   1.011  34.462  1.00 15.47
ATOM   8697  CA   GLN  1295      -7.760   0.500  35.257  1.00 15.54
ATOM   8698  CB   GLN  1295      -7.184   1.609  36.133  1.00 16.24
ATOM   8699  CG   GLN  1295      -6.427   2.633  35.322  1.00 23.28
ATOM   8700  CD   GLN  1295      -6.020   3.825  36.139  1.00 24.86
ATOM   8701  OE1  GLN  1295      -5.407   3.679  37.192  1.00 24.58
ATOM   8702  NE2  GLN  1295      -6.356   5.021  35.656  1.00 26.69
ATOM   8703  C    GLN  1295      -8.182  -0.682  36.106  1.00 13.96
ATOM   8704  O    GLN  1295      -7.394  -1.606  36.338  1.00 13.72
ATOM   8705  N    ALA  1296      -9.424  -0.654  36.576  1.00 13.84
ATOM   8706  CA   ALA  1296      -9.936  -1.755  37.377  1.00 13.08
ATOM   8707  CB   ALA  1296     -11.364  -1.452  37.848  1.00 14.56
ATOM   8708  C    ALA  1296      -9.925  -3.030  36.528  1.00 12.59
ATOM   8709  O    ALA  1296      -9.525  -4.083  37.010  1.00 13.75
ATOM   8710  N    PHE  1297     -10.345  -2.934  35.265  1.00 10.91
ATOM   8711  CA   PHE  1297     -10.363  -4.121  34.399  1.00 11.05
ATOM   8712  CB   PHE  1297     -10.886  -3.819  32.985  1.00  9.65
ATOM   8713  CG   PHE  1297     -12.206  -3.090  32.942  1.00 10.56
ATOM   8714  CD1  PHE  1297     -13.170  -3.279  33.929  1.00 10.04
ATOM   8715  CD2  PHE  1297     -12.475  -2.205  31.898  1.00 11.57
ATOM   8716  CE1  PHE  1297     -14.387  -2.593  33.891  1.00 10.32
ATOM   8717  CE2  PHE  1297     -13.684  -1.513  31.840  1.00 13.36
ATOM   8718  CZ   PHE  1297     -14.643  -1.706  32.841  1.00 12.32
ATOM   8719  C    PHE  1297      -8.956  -4.698  34.240  1.00 10.73
ATOM   8720  O    PHE  1297      -8.767  -5.908  34.318  1.00 10.33
ATOM   8721  N    GLU  1298      -7.981  -3.827  33.998  1.00 10.95
ATOM   8722  CA   GLU  1298      -6.607  -4.265  33.799  1.00 12.53
ATOM   8723  CB   GLU  1298      -5.736  -3.091  33.353  1.00 16.83
ATOM   8724  CG   GLU  1298      -4.361  -3.499  32.848  1.00 24.35
ATOM   8725  CD   GLU  1298      -4.377  -3.908  31.382  1.00 28.25
ATOM   8726  OE1  GLU  1298      -5.089  -4.875  31.025  1.00 30.56
ATOM   8727  OE2  GLU  1298      -3.681  -3.248  30.576  1.00 33.57
ATOM   8728  C    GLU  1298      -5.990  -4.913  35.036  1.00 11.29
ATOM   8729  O    GLU  1298      -5.396  -5.989  34.951  1.00 10.65
```

```
ATOM    8730  N   ASN  1299      -6.130  -4.274  36.190  1.00 10.85
ATOM    8731  CA  ASN  1299      -5.552  -4.838  37.414  1.00 11.72
ATOM    8732  CB  ASN  1299      -5.470  -3.769  38.511  1.00 11.28
ATOM    8733  CG  ASN  1299      -4.544  -2.621  38.121  1.00 14.85
ATOM    8734  OD1 ASN  1299      -3.460  -2.857  37.566  1.00 13.95
ATOM    8735  ND2 ASN  1299      -4.944  -1.389  38.413  1.00 13.47
ATOM    8736  C   ASN  1299      -6.301  -6.070  37.905  1.00 11.79
ATOM    8737  O   ASN  1299      -5.692  -6.983  38.473  1.00 11.65
ATOM    8738  N   ALA  1300      -7.619  -6.104  37.701  1.00 11.62
ATOM    8739  CA  ALA  1300      -8.384  -7.281  38.095  1.00  9.62
ATOM    8740  CB  ALA  1300      -9.864  -7.042  37.911  1.00 11.93
ATOM    8741  C   ALA  1300      -7.927  -8.436  37.209  1.00  9.30
ATOM    8742  O   ALA  1300      -7.725  -9.552  37.688  1.00 11.63
ATOM    8743  N   ALA  1301      -7.745  -8.176  35.918  1.00  9.27
ATOM    8744  CA  ALA  1301      -7.318  -9.247  35.033  1.00 10.11
ATOM    8745  CB  ALA  1301      -7.226  -8.749  33.591  1.00  8.32
ATOM    8746  C   ALA  1301      -5.981  -9.807  35.492  1.00 10.42
ATOM    8747  O   ALA  1301      -5.794 -11.029  35.523  1.00 10.44
ATOM    8748  N   THR  1302      -5.055  -8.926  35.873  1.00 10.18
ATOM    8749  CA  THR  1302      -3.729  -9.378  36.312  1.00 10.80
ATOM    8750  CB  THR  1302      -2.821  -8.189  36.740  1.00 11.76
ATOM    8751  OG1 THR  1302      -2.586  -7.327  35.612  1.00 12.59
ATOM    8752  CG2 THR  1302      -1.479  -8.702  37.260  1.00 11.04
ATOM    8753  C   THR  1302      -3.801 -10.378  37.457  1.00 10.37
ATOM    8754  O   THR  1302      -3.177 -11.439  37.391  1.00 10.85
ATOM    8755  N   VAL  1303      -4.563 -10.070  38.502  1.00  9.66
ATOM    8756  CA  VAL  1303      -4.622 -10.991  39.630  1.00  9.50
ATOM    8757  CB  VAL  1303      -5.112 -10.277  40.894  1.00 13.99
ATOM    8758  CG1 VAL  1303      -4.904 -11.178  42.085  1.00 18.44
ATOM    8759  CG2 VAL  1303      -4.326  -8.981  41.091  1.00 11.75
ATOM    8760  C   VAL  1303      -5.440 -12.253  39.358  1.00 10.29
ATOM    8761  O   VAL  1303      -5.187 -13.312  39.955  1.00  8.82
ATOM    8762  N   MET  1304      -6.412 -12.148  38.453  1.00 10.19
ATOM    8763  CA  MET  1304      -7.219 -13.307  38.069  1.00 12.39
ATOM    8764  CB  MET  1304      -8.431 -12.884  37.221  1.00 13.83
ATOM    8765  CG  MET  1304      -9.485 -12.065  37.951  1.00 18.90
ATOM    8766  SD  MET  1304     -10.483 -13.022  39.099  1.00 21.49
ATOM    8767  CE  MET  1304     -11.599 -13.972  37.916  1.00 17.14
ATOM    8768  C   MET  1304      -6.345 -14.277  37.254  1.00 11.47
ATOM    8769  O   MET  1304      -6.400 -15.495  37.462  1.00 11.55
ATOM    8770  N   ARG  1305      -5.549 -13.746  36.323  1.00 11.47
ATOM    8771  CA  ARG  1305      -4.674 -14.603  35.514  1.00  9.90
ATOM    8772  CB  ARG  1305      -3.925 -13.805  34.441  1.00  9.95
ATOM    8773  CG  ARG  1305      -4.805 -13.184  33.373  1.00 13.47
ATOM    8774  CD  ARG  1305      -4.001 -12.850  32.131  1.00 13.07
ATOM    8775  NE  ARG  1305      -4.782 -12.012  31.231  1.00 18.31
ATOM    8776  CZ  ARG  1305      -4.895 -10.694  31.343  1.00 17.19
ATOM    8777  NH1 ARG  1305      -4.261 -10.044  32.317  1.00 17.95
ATOM    8778  NH2 ARG  1305      -5.680 -10.033  30.500  1.00 16.90
ATOM    8779  C   ARG  1305      -3.643 -15.280  36.411  1.00 11.06
ATOM    8780  O   ARG  1305      -3.161 -16.370  36.103  1.00 10.28
ATOM    8781  N   ALA  1306      -3.314 -14.624  37.519  1.00  9.99
ATOM    8782  CA  ALA  1306      -2.342 -15.166  38.449  1.00 11.44
ATOM    8783  CB  ALA  1306      -1.767 -14.061  39.321  1.00 10.39
ATOM    8784  C   ALA  1306      -2.919 -16.278  39.319  1.00 12.44
ATOM    8785  O   ALA  1306      -2.172 -16.960  40.013  1.00 12.32
ATOM    8786  N   GLY  1307      -4.238 -16.455  39.297  1.00 12.27
ATOM    8787  CA  GLY  1307      -4.823 -17.529  40.075  1.00 13.76
ATOM    8788  C   GLY  1307      -6.098 -17.245  40.850  1.00 13.42
ATOM    8789  O   GLY  1307      -6.733 -18.176  41.345  1.00 14.10
ATOM    8790  N   ALA  1308      -6.481 -15.979  40.964  1.00 11.75
ATOM    8791  CA  ALA  1308      -7.690 -15.619  41.706  1.00 12.70
ATOM    8792  CB  ALA  1308      -7.653 -14.144  42.065  1.00 12.41
ATOM    8793  C   ALA  1308      -8.984 -15.939  40.958  1.00 12.62
ATOM    8794  O   ALA  1308      -9.007 -15.996  39.725  1.00 12.19
ATOM    8795  N   ASN  1309     -10.058 -16.165  41.715  1.00 12.53
ATOM    8796  CA  ASN  1309     -11.368 -16.466  41.138  1.00 13.45
ATOM    8797  CB  ASN  1309     -12.040 -17.641  41.852  1.00 14.86
ATOM    8798  CG  ASN  1309     -11.249 -18.914  41.769  1.00 15.09
ATOM    8799  OD1 ASN  1309     -10.999 -19.445  40.682  1.00 16.19
ATOM    8800  ND2 ASN  1309     -10.852 -19.426  42.926  1.00 12.00
ATOM    8801  C   ASN  1309     -12.288 -15.271  41.323  1.00 13.77
ATOM    8802  O   ASN  1309     -13.353 -15.207  40.719  1.00 14.80
ATOM    8803  N   MET  1310     -11.870 -14.332  42.165  1.00 13.61
ATOM    8804  CA  MET  1310     -12.687 -13.168  42.491  1.00 12.31
ATOM    8805  CB  MET  1310     -13.708 -13.584  43.562  1.00 14.22
ATOM    8806  CG  MET  1310     -14.634 -12.499  44.092  1.00 17.85
```

```
ATOM   8807  SD   MET  1310    -15.747 -13.199  45.346  1.00 20.90
ATOM   8808  CE   MET  1310    -17.324 -13.078  44.544  1.00 22.97
ATOM   8809  C    MET  1310    -11.794 -12.051  43.016  1.00 12.24
ATOM   8810  O    MET  1310    -10.737 -12.304  43.589  1.00 11.09
ATOM   8811  N    VAL  1311    -12.227 -10.816  42.818  1.00 12.28
ATOM   8812  CA   VAL  1311    -11.466  -9.666  43.272  1.00 13.29
ATOM   8813  CB   VAL  1311    -11.215  -8.728  42.088  1.00 15.81
ATOM   8814  CG1  VAL  1311    -10.651  -7.421  42.566  1.00 19.74
ATOM   8815  CG2  VAL  1311    -10.253  -9.399  41.106  1.00 16.21
ATOM   8816  C    VAL  1311    -12.234  -8.923  44.360  1.00 13.00
ATOM   8817  O    VAL  1311    -13.462  -8.831  44.303  1.00 13.49
ATOM   8818  N    LYS  1312    -11.519  -8.409  45.355  1.00 12.33
ATOM   8819  CA   LYS  1312    -12.158  -7.642  46.413  1.00 11.16
ATOM   8820  CB   LYS  1312    -11.806  -8.197  47.797  1.00 13.10
ATOM   8821  CG   LYS  1312    -12.465  -7.402  48.925  1.00 15.32
ATOM   8822  CD   LYS  1312    -12.623  -8.211  50.207  1.00 16.26
ATOM   8823  CE   LYS  1312    -11.297  -8.393  50.927  1.00 18.97
ATOM   8824  NZ   LYS  1312    -10.732  -7.084  51.357  1.00 15.88
ATOM   8825  C    LYS  1312    -11.716  -6.188  46.315  1.00 13.64
ATOM   8826  O    LYS  1312    -10.526  -5.897  46.172  1.00 13.12
ATOM   8827  N    ILE  1313    -12.680  -5.274  46.381  1.00 12.62
ATOM   8828  CA   ILE  1313    -12.388  -3.842  46.308  1.00 14.45
ATOM   8829  CB   ILE  1313    -12.802  -3.250  44.949  1.00 16.94
ATOM   8830  CG2  ILE  1313    -11.890  -3.779  43.839  1.00 19.34
ATOM   8831  CG1  ILE  1313    -14.266  -3.588  44.661  1.00 18.39
ATOM   8832  CD1  ILE  1313    -14.764  -3.036  43.343  1.00 19.90
ATOM   8833  C    ILE  1313    -13.127  -3.086  47.413  1.00 14.85
ATOM   8834  O    ILE  1313    -14.264  -3.423  47.748  1.00 13.87
ATOM   8835  N    GLU  1314    -12.483  -2.054  47.951  1.00 15.54
ATOM   8836  CA   GLU  1314    -13.047  -1.259  49.043  1.00 14.90
ATOM   8837  CB   GLU  1314    -11.944  -0.825  50.019  1.00 16.10
ATOM   8838  CG   GLU  1314    -11.092  -1.946  50.573  1.00 17.92
ATOM   8839  CD   GLU  1314     -9.990  -1.445  51.512  1.00 18.81
ATOM   8840  OE1  GLU  1314     -9.869  -0.218  51.713  1.00 18.97
ATOM   8841  OE2  GLU  1314     -9.250  -2.287  52.056  1.00 20.27
ATOM   8842  C    GLU  1314    -13.783  -0.009  48.587  1.00 14.25
ATOM   8843  O    GLU  1314    -13.290   0.737  47.746  1.00 16.21
ATOM   8844  N    GLY  1315    -14.963   0.229  49.151  1.00 16.28
ATOM   8845  CA   GLY  1315    -15.705   1.416  48.781  1.00 16.32
ATOM   8846  C    GLY  1315    -17.196   1.197  48.692  1.00 16.99
ATOM   8847  O    GLY  1315    -17.662   0.060  48.630  1.00 16.14
ATOM   8848  N    GLY  1316    -17.942   2.295  48.669  1.00 16.84
ATOM   8849  CA   GLY  1316    -19.390   2.207  48.600  1.00 18.58
ATOM   8850  C    GLY  1316    -19.974   2.452  47.224  1.00 19.09
ATOM   8851  O    GLY  1316    -19.491   1.928  46.222  1.00 18.98
ATOM   8852  N    GLU  1317    -21.022   3.268  47.196  1.00 19.78
ATOM   8853  CA   GLU  1317    -21.753   3.608  45.983  1.00 21.03
ATOM   8854  CB   GLU  1317    -22.791   4.686  46.302  1.00 24.13
ATOM   8855  CG   GLU  1317    -24.226   4.206  46.235  1.00 34.04
ATOM   8856  CD   GLU  1317    -24.910   4.591  44.946  1.00 35.84
ATOM   8857  OE1  GLU  1317    -24.373   4.264  43.863  1.00 40.02
ATOM   8858  OE2  GLU  1317    -25.986   5.219  45.018  1.00 38.96
ATOM   8859  C    GLU  1317    -20.948   4.052  44.768  1.00 19.20
ATOM   8860  O    GLU  1317    -21.318   3.733  43.640  1.00 17.96
ATOM   8861  N    TRP  1318    -19.857   4.783  44.981  1.00 17.44
ATOM   8862  CA   TRP  1318    -19.079   5.258  43.846  1.00 17.52
ATOM   8863  CB   TRP  1318    -17.909   6.149  44.301  1.00 18.44
ATOM   8864  CG   TRP  1318    -16.754   5.430  44.951  1.00 17.60
ATOM   8865  CD2  TRP  1318    -15.534   5.018  44.316  1.00 17.10
ATOM   8866  CE2  TRP  1318    -14.730   4.408  45.307  1.00 16.85
ATOM   8867  CE3  TRP  1318    -15.043   5.106  43.005  1.00 15.81
ATOM   8868  CD1  TRP  1318    -16.645   5.060  46.262  1.00 18.81
ATOM   8869  NE1  TRP  1318    -15.431   4.448  46.483  1.00 17.06
ATOM   8870  CZ2  TRP  1318    -13.458   3.888  45.030  1.00 16.56
ATOM   8871  CZ3  TRP  1318    -13.774   4.588  42.727  1.00 16.65
ATOM   8872  CH2  TRP  1318    -13.000   3.987  43.736  1.00 13.94
ATOM   8873  C    TRP  1318    -18.557   4.121  42.972  1.00 15.10
ATOM   8874  O    TRP  1318    -18.168   4.346  41.830  1.00 17.22
ATOM   8875  N    LEU  1319    -18.580   2.903  43.507  1.00 15.72
ATOM   8876  CA   LEU  1319    -18.100   1.712  42.804  1.00 14.82
ATOM   8877  CB   LEU  1319    -17.556   0.698  43.813  1.00 15.07
ATOM   8878  CG   LEU  1319    -16.228   1.040  44.490  1.00 15.24
ATOM   8879  CD1  LEU  1319    -15.872  -0.036  45.504  1.00 14.37
ATOM   8880  CD2  LEU  1319    -15.139   1.148  43.429  1.00 14.65
ATOM   8881  C    LEU  1319    -19.129   0.992  41.938  1.00 15.55
ATOM   8882  O    LEU  1319    -18.779   0.080  41.192  1.00 16.40
ATOM   8883  N    VAL  1320    -20.393   1.385  42.028  1.00 15.54
```

= ==

```
ATOM   8884  CA   VAL  1320    -21.446    0.700   41.274  1.00 15.61
ATOM   8885  CB   VAL  1320    -22.769    1.480   41.328  1.00 15.50
ATOM   8886  CG1  VAL  1320    -23.760    0.896   40.322  1.00 16.93
ATOM   8887  CG2  VAL  1320    -23.339    1.407   42.722  1.00 15.37
ATOM   8888  C    VAL  1320    -21.114    0.401   39.819  1.00 15.88
ATOM   8889  O    VAL  1320    -21.237   -0.740   39.375  1.00 16.33
ATOM   8890  N    GLU  1321    -20.703    1.427   39.078  1.00 15.89
ATOM   8891  CA   GLU  1321    -20.367    1.256   37.667  1.00 16.86
ATOM   8892  CB   GLU  1321    -19.982    2.601   37.038  1.00 18.42
ATOM   8893  CG   GLU  1321    -19.483    2.486   35.604  1.00 23.16
ATOM   8894  CD   GLU  1321    -19.156    3.836   34.967  1.00 27.92
ATOM   8895  OE1  GLU  1321    -18.295    4.576   35.495  1.00 28.97
ATOM   8896  OE2  GLU  1321    -19.761    4.153   33.923  1.00 30.95
ATOM   8897  C    GLU  1321    -19.212    0.265   37.509  1.00 16.05
ATOM   8898  O    GLU  1321    -19.258   -0.639   36.671  1.00 13.68
ATOM   8899  N    THR  1322    -18.180    0.441   38.325  1.00 13.47
ATOM   8900  CA   THR  1322    -17.013   -0.432   38.271  1.00 14.01
ATOM   8901  CB   THR  1322    -15.983   -0.025   39.352  1.00 14.03
ATOM   8902  OG1  THR  1322    -15.481    1.280   39.046  1.00 16.65
ATOM   8903  CG2  THR  1322    -14.807   -1.001   39.395  1.00 13.60
ATOM   8904  C    THR  1322    -17.432   -1.887   38.462  1.00 11.93
ATOM   8905  O    THR  1322    -17.064   -2.768   37.675  1.00 13.98
ATOM   8906  N    VAL  1323    -18.221   -2.133   39.501  1.00 12.13
ATOM   8907  CA   VAL  1323    -18.696   -3.483   39.794  1.00 12.28
ATOM   8908  CB   VAL  1323    -19.511   -3.508   41.107  1.00 14.17
ATOM   8909  CG1  VAL  1323    -20.152   -4.881   41.303  1.00 14.33
ATOM   8910  CG2  VAL  1323    -18.597   -3.177   42.275  1.00 12.26
ATOM   8911  C    VAL  1323    -19.537   -4.061   38.647  1.00 13.33
ATOM   8912  O    VAL  1323    -19.326   -5.203   38.226  1.00 13.70
ATOM   8913  N    GLN  1324    -20.480   -3.274   38.137  1.00 13.37
ATOM   8914  CA   GLN  1324    -21.322   -3.740   37.039  1.00 15.20
ATOM   8915  CB   GLN  1324    -22.300   -2.640   36.599  1.00 16.72
ATOM   8916  CG   GLN  1324    -23.292   -2.224   37.682  1.00 22.21
ATOM   8917  CD   GLN  1324    -24.211   -1.098   37.244  1.00 24.87
ATOM   8918  OE1  GLN  1324    -23.764   -0.121   36.646  1.00 26.46
ATOM   8919  NE2  GLN  1324    -25.498   -1.222   37.552  1.00 27.32
ATOM   8920  C    GLN  1324    -20.460   -4.149   35.850  1.00 15.72
ATOM   8921  O    GLN  1324    -20.617   -5.237   35.304  1.00 14.44
ATOM   8922  N    MET  1325    -19.536   -3.273   35.469  1.00 14.94
ATOM   8923  CA   MET  1325    -18.670   -3.533   34.334  1.00 14.16
ATOM   8924  CB   MET  1325    -17.942   -2.251   33.932  1.00 13.53
ATOM   8925  CG   MET  1325    -18.877   -1.166   33.384  1.00 18.17
ATOM   8926  SD   MET  1325    -17.961    0.297   32.829  1.00 18.88
ATOM   8927  CE   MET  1325    -17.729   -0.079   31.088  1.00 21.14
ATOM   8928  C    MET  1325    -17.688   -4.684   34.558  1.00 13.07
ATOM   8929  O    MET  1325    -17.438   -5.465   33.639  1.00 12.98
ATOM   8930  N    LEU  1326    -17.127   -4.809   35.757  1.00 12.81
ATOM   8931  CA   LEU  1326    -16.213   -5.919   36.009  1.00 13.89
ATOM   8932  CB   LEU  1326    -15.616   -5.835   37.417  1.00 13.67
ATOM   8933  CG   LEU  1326    -14.431   -4.878   37.574  1.00 14.23
ATOM   8934  CD1  LEU  1326    -14.102   -4.695   39.044  1.00 13.52
ATOM   8935  CD2  LEU  1326    -13.228   -5.438   36.815  1.00 13.49
ATOM   8936  C    LEU  1326    -16.965   -7.235   35.864  1.00 15.09
ATOM   8937  O    LEU  1326    -16.477   -8.177   35.229  1.00 17.34
ATOM   8938  N    THR  1327    -18.159   -7.292   36.453  1.00 15.39
ATOM   8939  CA   THR  1327    -18.993   -8.495   36.420  1.00 17.21
ATOM   8940  CB   THR  1327    -20.327   -8.284   37.203  1.00 19.12
ATOM   8941  OG1  THR  1327    -20.041   -8.025   38.585  1.00 22.00
ATOM   8942  CG2  THR  1327    -21.203   -9.530   37.120  1.00 21.12
ATOM   8943  C    THR  1327    -19.331   -8.944   34.999  1.00 17.87
ATOM   8944  O    THR  1327    -19.200  -10.123   34.673  1.00 15.79
ATOM   8945  N    GLU  1328    -19.763   -8.018   34.146  1.00 19.35
ATOM   8946  CA   GLU  1328    -20.110   -8.417   32.787  1.00 19.92
ATOM   8947  CB   GLU  1328    -20.951   -7.330   32.104  1.00 24.09
ATOM   8948  CG   GLU  1328    -20.189   -6.213   31.461  1.00 25.04
ATOM   8949  CD   GLU  1328    -21.115   -5.173   30.854  1.00 23.39
ATOM   8950  OE1  GLU  1328    -22.172   -5.550   30.306  1.00 27.43
ATOM   8951  OE2  GLU  1328    -20.782   -3.977   30.916  1.00 21.37
ATOM   8952  C    GLU  1328    -18.861   -8.769   31.971  1.00 20.62
ATOM   8953  O    GLU  1328    -18.953   -9.345   30.882  1.00 22.88
ATOM   8954  N    ARG  1329    -17.692   -8.443   32.516  1.00 18.60
ATOM   8955  CA   ARG  1329    -16.425   -8.760   31.870  1.00 16.07
ATOM   8956  CB   ARG  1329    -15.499   -7.539   31.903  1.00 15.66
ATOM   8957  CG   ARG  1329    -15.916   -6.473   30.899  1.00 12.22
ATOM   8958  CD   ARG  1329    -15.278   -5.098   31.121  1.00 15.51
ATOM   8959  NE   ARG  1329    -15.805   -4.147   30.144  1.00 11.85
ATOM   8960  CZ   ARG  1329    -17.075   -3.748   30.096  1.00 13.40
```

```
ATOM   8961  NH1 ARG  1329    -17.947  -4.206  30.980  1.00 13.96
ATOM   8962  NH2 ARG  1329    -17.486  -2.922  29.142  1.00 11.23
ATOM   8963  C   ARG  1329    -15.737  -9.986  32.496  1.00 16.04
ATOM   8964  O   ARG  1329    -14.508 -10.111  32.466  1.00 15.96
ATOM   8965  N   ALA  1330    -16.541 -10.872  33.078  1.00 15.89
ATOM   8966  CA  ALA  1330    -16.060 -12.129  33.678  1.00 14.56
ATOM   8967  CB  ALA  1330    -15.213 -12.897  32.650  1.00 14.48
ATOM   8968  C   ALA  1330    -15.306 -12.070  35.004  1.00 14.53
ATOM   8969  O   ALA  1330    -14.685 -13.053  35.409  1.00 14.82
ATOM   8970  N   VAL  1331    -15.359 -10.929  35.679  1.00 13.56
ATOM   8971  CA  VAL  1331    -14.678 -10.779  36.951  1.00 14.03
ATOM   8972  CB  VAL  1331    -13.755  -9.536  36.926  1.00 14.54
ATOM   8973  CG1 VAL  1331    -13.126  -9.306  38.300  1.00 15.64
ATOM   8974  CG2 VAL  1331    -12.653  -9.736  35.888  1.00 17.69
ATOM   8975  C   VAL  1331    -15.667 -10.663  38.117  1.00 13.93
ATOM   8976  O   VAL  1331    -16.349  -9.660  38.260  1.00 15.56
ATOM   8977  N   PRO  1332    -15.779 -11.716  38.946  1.00 14.57
ATOM   8978  CD  PRO  1332    -15.253 -13.080  38.790  1.00 12.80
ATOM   8979  CA  PRO  1332    -16.706 -11.638  40.079  1.00 14.22
ATOM   8980  CB  PRO  1332    -16.793 -13.077  40.572  1.00 15.61
ATOM   8981  CG  PRO  1332    -15.500 -13.663  40.155  1.00 20.45
ATOM   8982  C   PRO  1332    -16.111 -10.694  41.100  1.00 13.84
ATOM   8983  O   PRO  1332    -14.888 -10.616  41.268  1.00 11.75
ATOM   8984  N   VAL  1333    -16.976  -9.966  41.784  1.00 12.32
ATOM   8985  CA  VAL  1333    -16.502  -8.991  42.752  1.00 11.45
ATOM   8986  CB  VAL  1333    -16.886  -7.561  42.311  1.00 10.56
ATOM   8987  CG1 VAL  1333    -16.465  -6.551  43.378  1.00 12.68
ATOM   8988  CG2 VAL  1333    -16.228  -7.235  40.987  1.00  9.00
ATOM   8989  C   VAL  1333    -17.022  -9.206  44.150  1.00 13.49
ATOM   8990  O   VAL  1333    -18.176  -9.581  44.346  1.00 13.53
ATOM   8991  N   CYS  1334    -16.145  -8.987  45.122  1.00 12.49
ATOM   8992  CA  CYS  1334    -16.515  -9.072  46.524  1.00 13.08
ATOM   8993  CB  CYS  1334    -15.561  -9.988  47.294  1.00 14.71
ATOM   8994  SG  CYS  1334    -15.827  -9.940  49.091  1.00 15.45
ATOM   8995  C   CYS  1334    -16.359  -7.637  47.015  1.00 13.95
ATOM   8996  O   CYS  1334    -15.312  -7.011  46.818  1.00 14.76
ATOM   8997  N   GLY  1335    -17.413  -7.114  47.627  1.00 14.01
ATOM   8998  CA  GLY  1335    -17.373  -5.764  48.141  1.00 13.56
ATOM   8999  C   GLY  1335    -16.726  -5.747  49.510  1.00 13.93
ATOM   9000  O   GLY  1335    -16.501  -6.802  50.105  1.00 14.54
ATOM   9001  N   HIS  1336    -16.445  -4.551  50.017  1.00 14.71
ATOM   9002  CA  HIS  1336    -15.801  -4.397  51.320  1.00 14.53
ATOM   9003  CB  HIS  1336    -14.277  -4.469  51.143  1.00 13.80
ATOM   9004  CG  HIS  1336    -13.511  -4.501  52.431  1.00 16.43
ATOM   9005  CD2 HIS  1336    -13.866  -4.166  53.697  1.00 14.92
ATOM   9006  ND1 HIS  1336    -12.199  -4.917  52.502  1.00 16.33
ATOM   9007  CE1 HIS  1336    -11.778  -4.839  53.752  1.00 17.68
ATOM   9008  NE2 HIS  1336    -12.769  -4.386  54.498  1.00 15.76
ATOM   9009  C   HIS  1336    -16.206  -3.043  51.905  1.00 14.17
ATOM   9010  O   HIS  1336    -15.852  -2.005  51.363  1.00 13.31
ATOM   9011  N   LEU  1337    -16.947  -3.069  53.010  1.00 16.38
ATOM   9012  CA  LEU  1337    -17.417  -1.855  53.662  1.00 14.42
ATOM   9013  CB  LEU  1337    -18.937  -1.727  53.509  1.00 14.97
ATOM   9014  CG  LEU  1337    -19.500  -1.425  52.118  1.00 13.18
ATOM   9015  CD1 LEU  1337    -21.022  -1.498  52.174  1.00 16.54
ATOM   9016  CD2 LEU  1337    -19.039  -0.057  51.659  1.00 15.16
ATOM   9017  C   LEU  1337    -17.074  -1.819  55.152  1.00 15.08
ATOM   9018  O   LEU  1337    -16.704  -2.835  55.735  1.00 15.49
ATOM   9019  N   GLY  1338    -17.234  -0.646  55.763  1.00 16.52
ATOM   9020  CA  GLY  1338    -16.931  -0.487  57.175  1.00 18.65
ATOM   9021  C   GLY  1338    -15.546   0.103  57.329  1.00 20.37
ATOM   9022  O   GLY  1338    -15.244   1.169  56.779  1.00 20.72
ATOM   9023  N   LEU  1339    -14.692  -0.592  58.071  1.00 21.08
ATOM   9024  CA  LEU  1339    -13.328  -0.130  58.274  1.00 21.80
ATOM   9025  CB  LEU  1339    -12.760  -0.690  59.586  1.00 22.96
ATOM   9026  CG  LEU  1339    -11.636   0.099  60.273  1.00 26.11
ATOM   9027  CD1 LEU  1339    -11.099  -0.714  61.435  1.00 25.23
ATOM   9028  CD2 LEU  1339    -10.528   0.410  59.290  1.00 25.89
ATOM   9029  C   LEU  1339    -12.500  -0.633  57.096  1.00 21.63
ATOM   9030  O   LEU  1339    -12.007  -1.762  57.108  1.00 21.30
ATOM   9031  N   THR  1340    -12.386   0.205  56.070  1.00 21.68
ATOM   9032  CA  THR  1340    -11.618  -0.104  54.864  1.00 22.62
ATOM   9033  CB  THR  1340    -12.301   0.507  53.626  1.00 23.97
ATOM   9034  OG1 THR  1340    -12.526   1.906  53.842  1.00 23.53
ATOM   9035  CG2 THR  1340    -13.641  -0.169  53.375  1.00 26.26
ATOM   9036  C   THR  1340    -10.232   0.510  55.053  1.00 20.26
ATOM   9037  O   THR  1340    -10.057   1.715  54.899  1.00 23.50
```

```
ATOM   9038  N    PRO  1341      -9.226  -0.323  55.372  1.00 20.57
ATOM   9039  CD   PRO  1341      -9.300  -1.794  55.327  1.00 21.40
ATOM   9040  CA   PRO  1341      -7.842   0.114  55.603  1.00 19.00
ATOM   9041  CB   PRO  1341      -7.091  -1.205  55.802  1.00 22.07
ATOM   9042  CG   PRO  1341      -7.881  -2.171  54.978  1.00 25.73
ATOM   9043  C    PRO  1341      -7.180   1.019  54.570  1.00 18.31
ATOM   9044  O    PRO  1341      -6.332   1.832  54.928  1.00 16.70
ATOM   9045  N    GLN  1342      -7.551   0.895  53.299  1.00 15.90
ATOM   9046  CA   GLN  1342      -6.944   1.751  52.284  1.00 18.99
ATOM   9047  CB   GLN  1342      -7.432   1.355  50.882  1.00 16.29
ATOM   9048  CG   GLN  1342      -6.722   0.124  50.316  1.00 17.70
ATOM   9049  CD   GLN  1342      -7.365  -0.407  49.047  1.00 18.63
ATOM   9050  OE1  GLN  1342      -7.891   0.360  48.236  1.00 21.48
ATOM   9051  NE2  GLN  1342      -7.310  -1.725  48.858  1.00 20.30
ATOM   9052  C    GLN  1342      -7.225   3.235  52.559  1.00 18.46
ATOM   9053  O    GLN  1342      -6.435   4.104  52.189  1.00 20.27
ATOM   9054  N    SER  1343      -8.347   3.528  53.207  1.00 20.86
ATOM   9055  CA   SER  1343      -8.684   4.913  53.528  1.00 21.17
ATOM   9056  CB   SER  1343     -10.190   5.154  53.330  1.00 22.94
ATOM   9057  OG   SER  1343     -10.574   4.937  51.979  1.00 24.54
ATOM   9058  C    SER  1343      -8.288   5.261  54.972  1.00 21.41
ATOM   9059  O    SER  1343      -8.924   6.099  55.620  1.00 20.45
ATOM   9060  N    VAL  1344      -7.232   4.632  55.480  1.00 20.55
ATOM   9061  CA   VAL  1344      -6.802   4.911  56.849  1.00 21.71
ATOM   9062  CB   VAL  1344      -5.552   4.060  57.252  1.00 23.85
ATOM   9063  CG1  VAL  1344      -4.370   4.379  56.351  1.00 21.50
ATOM   9064  CG2  VAL  1344      -5.201   4.321  58.712  1.00 22.91
ATOM   9065  C    VAL  1344      -6.501   6.398  57.057  1.00 22.37
ATOM   9066  O    VAL  1344      -6.803   6.960  58.114  1.00 22.26
ATOM   9067  N    ASN  1345      -5.929   7.038  56.041  1.00 22.04
ATOM   9068  CA   ASN  1345      -5.596   8.458  56.123  1.00 22.35
ATOM   9069  CB   ASN  1345      -4.665   8.845  54.974  1.00 22.83
ATOM   9070  CG   ASN  1345      -3.349   8.103  55.030  1.00 22.33
ATOM   9071  OD1  ASN  1345      -2.566   8.288  55.958  1.00 23.07
ATOM   9072  ND2  ASN  1345      -3.103   7.248  54.045  1.00 22.68
ATOM   9073  C    ASN  1345      -6.840   9.336  56.103  1.00 24.24
ATOM   9074  O    ASN  1345      -6.816  10.465  56.588  1.00 23.31
ATOM   9075  N    ILE  1346      -7.923   8.817  55.534  1.00 24.67
ATOM   9076  CA   ILE  1346      -9.179   9.561  55.477  1.00 26.60
ATOM   9077  CB   ILE  1346     -10.155   8.949  54.447  1.00 25.22
ATOM   9078  CG2  ILE  1346     -11.529   9.593  54.580  1.00 25.45
ATOM   9079  CG1  ILE  1346      -9.604   9.121  53.031  1.00 26.82
ATOM   9080  CD1  ILE  1346      -9.646  10.548  52.518  1.00 27.54
ATOM   9081  C    ILE  1346      -9.847   9.534  56.850  1.00 25.86
ATOM   9082  O    ILE  1346     -10.311  10.565  57.337  1.00 27.66
ATOM   9083  N    PHE  1347      -9.896   8.352  57.463  1.00 26.34
ATOM   9084  CA   PHE  1347     -10.513   8.180  58.780  1.00 27.79
ATOM   9085  CB   PHE  1347     -10.855   6.707  59.040  1.00 30.55
ATOM   9086  CG   PHE  1347     -11.662   6.055  57.951  1.00 33.41
ATOM   9087  CD1  PHE  1347     -12.751   6.707  57.382  1.00 33.70
ATOM   9088  CD2  PHE  1347     -11.349   4.766  57.518  1.00 34.68
ATOM   9089  CE1  PHE  1347     -13.516   6.088  56.398  1.00 34.26
ATOM   9090  CE2  PHE  1347     -12.108   4.137  56.533  1.00 34.13
ATOM   9091  CZ   PHE  1347     -13.193   4.799  55.973  1.00 35.64
ATOM   9092  C    PHE  1347      -9.609   8.655  59.912  1.00 28.04
ATOM   9093  O    PHE  1347     -10.062   8.822  61.044  1.00 25.56
ATOM   9094  N    GLY  1348      -8.329   8.852  59.609  1.00 28.73
ATOM   9095  CA   GLY  1348      -7.387   9.290  60.625  1.00 30.19
ATOM   9096  C    GLY  1348      -6.961   8.147  61.531  1.00 31.20
ATOM   9097  O    GLY  1348      -6.574   8.361  62.679  1.00 32.36
ATOM   9098  N    GLY  1349      -7.039   6.923  61.019  1.00 32.22
ATOM   9099  CA   GLY  1349      -6.651   5.770  61.812  1.00 33.19
ATOM   9100  C    GLY  1349      -7.580   4.592  61.597  1.00 34.56
ATOM   9101  O    GLY  1349      -8.482   4.649  60.762  1.00 32.55
ATOM   9102  N    TYR  1350      -7.359   3.517  62.346  1.00 35.88
ATOM   9103  CA   TYR  1350      -8.195   2.333  62.226  1.00 36.67
ATOM   9104  CB   TYR  1350      -7.336   1.069  62.293  1.00 36.59
ATOM   9105  CG   TYR  1350      -6.220   1.046  61.271  1.00 38.85
ATOM   9106  CD1  TYR  1350      -4.989   1.643  61.542  1.00 38.83
ATOM   9107  CE1  TYR  1350      -3.969   1.661  60.592  1.00 38.99
ATOM   9108  CD2  TYR  1350      -6.406   0.463  60.017  1.00 38.83
ATOM   9109  CE2  TYR  1350      -5.389   0.478  59.054  1.00 38.92
ATOM   9110  CZ   TYR  1350      -4.177   1.079  59.350  1.00 38.88
ATOM   9111  OH   TYR  1350      -3.174   1.117  58.407  1.00 38.09
ATOM   9112  C    TYR  1350      -9.239   2.327  63.336  1.00 37.58
ATOM   9113  O    TYR  1350      -9.110   1.612  64.330  1.00 38.34
ATOM   9114  N    LYS  1351     -10.278   3.132  63.150  1.00 37.80
```

```
ATOM   9115  CA   LYS  1351     -11.349   3.254  64.128  1.00 37.85
ATOM   9116  CB   LYS  1351     -11.650   4.738  64.354  1.00 39.96
ATOM   9117  CG   LYS  1351     -10.399   5.592  64.529  1.00 41.93
ATOM   9118  CD   LYS  1351     -10.671   7.063  64.253  1.00 43.31
ATOM   9119  CE   LYS  1351      -9.373   7.860  64.209  1.00 44.78
ATOM   9120  NZ   LYS  1351      -9.596   9.288  63.846  1.00 44.41
ATOM   9121  C    LYS  1351     -12.612   2.531  63.648  1.00 37.02
ATOM   9122  O    LYS  1351     -12.809   2.329  62.449  1.00 35.65
ATOM   9123  N    VAL  1352     -13.461   2.145  64.595  1.00 36.10
ATOM   9124  CA   VAL  1352     -14.705   1.456  64.280  1.00 35.05
ATOM   9125  CB   VAL  1352     -15.483   1.100  65.569  1.00 35.70
ATOM   9126  CG1  VAL  1352     -16.731   0.303  65.232  1.00 34.09
ATOM   9127  CG2  VAL  1352     -14.586   0.314  66.512  1.00 35.71
ATOM   9128  C    VAL  1352     -15.570   2.358  63.405  1.00 34.29
ATOM   9129  O    VAL  1352     -15.604   3.576  63.595  1.00 32.86
ATOM   9130  N    GLN  1353     -16.259   1.755  62.441  1.00 33.15
ATOM   9131  CA   GLN  1353     -17.121   2.493  61.523  1.00 33.61
ATOM   9132  CB   GLN  1353     -16.664   2.248  60.082  1.00 35.20
ATOM   9133  CG   GLN  1353     -16.394   3.503  59.269  1.00 37.01
ATOM   9134  CD   GLN  1353     -15.374   4.407  59.920  1.00 37.73
ATOM   9135  OE1  GLN  1353     -14.339   3.948  60.405  1.00 39.42
ATOM   9136  NE2  GLN  1353     -15.656   5.703  59.929  1.00 39.06
ATOM   9137  C    GLN  1353     -18.568   2.038  61.678  1.00 32.00
ATOM   9138  O    GLN  1353     -18.839   1.006  62.289  1.00 32.23
ATOM   9139  N    GLY  1354     -19.497   2.810  61.124  1.00 32.12
ATOM   9140  CA   GLY  1354     -20.901   2.445  61.207  1.00 32.69
ATOM   9141  C    GLY  1354     -21.624   2.931  62.453  1.00 33.83
ATOM   9142  O    GLY  1354     -22.812   2.658  62.634  1.00 33.12
ATOM   9143  N    ARG  1355     -20.912   3.646  63.317  1.00 33.73
ATOM   9144  CA   ARG  1355     -21.509   4.168  64.538  1.00 35.35
ATOM   9145  CB   ARG  1355     -20.420   4.610  65.523  1.00 36.22
ATOM   9146  CG   ARG  1355     -19.601   3.469  66.116  1.00 37.99
ATOM   9147  CD   ARG  1355     -19.623   3.530  67.636  1.00 37.53
ATOM   9148  NE   ARG  1355     -18.923   2.412  68.266  1.00 38.27
ATOM   9149  CZ   ARG  1355     -17.601   2.278  68.305  1.00 37.61
ATOM   9150  NH1  ARG  1355     -16.819   3.195  67.752  1.00 38.90
ATOM   9151  NH2  ARG  1355     -17.062   1.228  68.905  1.00 38.50
ATOM   9152  C    ARG  1355     -22.417   5.353  64.221  1.00 34.99
ATOM   9153  O    ARG  1355     -21.988   6.326  63.601  1.00 33.87
ATOM   9154  N    GLY  1356     -23.673   5.268  64.645  1.00 35.30
ATOM   9155  CA   GLY  1356     -24.603   6.353  64.388  1.00 36.39
ATOM   9156  C    GLY  1356     -25.609   5.991  63.316  1.00 36.56
ATOM   9157  O    GLY  1356     -25.403   5.044  62.556  1.00 37.08
ATOM   9158  N    ASP  1357     -26.704   6.741  63.251  1.00 35.94
ATOM   9159  CA   ASP  1357     -27.730   6.470  62.257  1.00 35.55
ATOM   9160  CB   ASP  1357     -29.029   7.206  62.596  1.00 38.36
ATOM   9161  CG   ASP  1357     -29.677   6.687  63.863  1.00 39.91
ATOM   9162  OD1  ASP  1357     -29.647   5.458  64.092  1.00 41.41
ATOM   9163  OD2  ASP  1357     -30.229   7.504  64.624  1.00 42.41
ATOM   9164  C    ASP  1357     -27.280   6.860  60.859  1.00 33.61
ATOM   9165  O    ASP  1357     -27.444   6.092  59.915  1.00 34.09
ATOM   9166  N    GLU  1358     -26.710   8.051  60.723  1.00 31.82
ATOM   9167  CA   GLU  1358     -26.257   8.517  59.419  1.00 32.56
ATOM   9168  CB   GLU  1358     -25.702   9.938  59.531  1.00 35.82
ATOM   9169  CG   GLU  1358     -25.286  10.550  58.206  1.00 41.80
ATOM   9170  CD   GLU  1358     -24.844  11.992  58.347  1.00 44.28
ATOM   9171  OE1  GLU  1358     -25.675  12.835  58.748  1.00 47.82
ATOM   9172  OE2  GLU  1358     -23.665  12.286  58.062  1.00 47.55
ATOM   9173  C    GLU  1358     -25.203   7.584  58.819  1.00 31.25
ATOM   9174  O    GLU  1358     -25.300   7.199  57.652  1.00 29.54
ATOM   9175  N    ALA  1359     -24.205   7.218  59.619  1.00 28.61
ATOM   9176  CA   ALA  1359     -23.141   6.327  59.162  1.00 26.73
ATOM   9177  CB   ALA  1359     -22.033   6.251  60.213  1.00 27.02
ATOM   9178  C    ALA  1359     -23.694   4.931  58.887  1.00 25.02
ATOM   9179  O    ALA  1359     -23.314   4.281  57.910  1.00 25.54
ATOM   9180  N    GLY  1360     -24.591   4.483  59.759  1.00 22.90
ATOM   9181  CA   GLY  1360     -25.191   3.171  59.606  1.00 22.42
ATOM   9182  C    GLY  1360     -26.036   3.070  58.350  1.00 23.63
ATOM   9183  O    GLY  1360     -25.874   2.143  57.552  1.00 21.50
ATOM   9184  N    ASP  1361     -26.940   4.029  58.175  1.00 23.37
ATOM   9185  CA   ASP  1361     -27.809   4.055  57.010  1.00 24.97
ATOM   9186  CB   ASP  1361     -28.776   5.242  57.082  1.00 25.15
ATOM   9187  CG   ASP  1361     -29.778   5.109  58.212  1.00 25.98
ATOM   9188  OD1  ASP  1361     -30.037   3.963  58.634  1.00 24.04
ATOM   9189  OD2  ASP  1361     -30.312   6.148  58.662  1.00 26.75
ATOM   9190  C    ASP  1361     -27.001   4.128  55.715  1.00 24.67
ATOM   9191  O    ASP  1361     -27.418   3.599  54.682  1.00 23.97
```

```
ATOM   9192  N    GLN  1362    -25.843   4.775  55.763  1.00 23.06
ATOM   9193  CA   GLN  1362    -25.021   4.882  54.563  1.00 23.44
ATOM   9194  CB   GLN  1362    -23.890   5.896  54.766  1.00 23.04
ATOM   9195  CG   GLN  1362    -23.177   6.276  53.474  1.00 25.55
ATOM   9196  CD   GLN  1362    -24.113   6.925  52.464  1.00 29.06
ATOM   9197  OE1  GLN  1362    -24.758   7.933  52.760  1.00 28.92
ATOM   9198  NE2  GLN  1362    -24.195   6.345  51.266  1.00 29.63
ATOM   9199  C    GLN  1362    -24.439   3.519  54.194  1.00 23.54
ATOM   9200  O    GLN  1362    -24.409   3.157  53.019  1.00 23.64
ATOM   9201  N    LEU  1363    -23.984   2.764  55.190  1.00 24.10
ATOM   9202  CA   LEU  1363    -23.418   1.441  54.932  1.00 25.78
ATOM   9203  CB   LEU  1363    -22.840   0.831  56.214  1.00 27.37
ATOM   9204  CG   LEU  1363    -21.488   1.337  56.715  1.00 30.02
ATOM   9205  CD1  LEU  1363    -21.078   0.539  57.948  1.00 29.46
ATOM   9206  CD2  LEU  1363    -20.436   1.184  55.628  1.00 30.43
ATOM   9207  C    LEU  1363    -24.453   0.485  54.354  1.00 25.61
ATOM   9208  O    LEU  1363    -24.186  -0.215  53.378  1.00 24.86
ATOM   9209  N    LEU  1364    -25.633   0.446  54.965  1.00 25.26
ATOM   9210  CA   LEU  1364    -26.690  -0.433  54.486  1.00 25.78
ATOM   9211  CB   LEU  1364    -27.940  -0.270  55.355  1.00 28.25
ATOM   9212  CG   LEU  1364    -28.877  -1.483  55.466  1.00 30.43
ATOM   9213  CD1  LEU  1364    -29.981  -1.183  56.470  1.00 33.01
ATOM   9214  CD2  LEU  1364    -29.468  -1.809  54.117  1.00 31.42
ATOM   9215  C    LEU  1364    -26.996  -0.081  53.030  1.00 24.42
ATOM   9216  O    LEU  1364    -27.124  -0.963  52.180  1.00 24.75
ATOM   9217  N    SER  1365    -27.091   1.216  52.748  1.00 24.25
ATOM   9218  CA   SER  1365    -27.372   1.696  51.399  1.00 22.74
ATOM   9219  CB   SER  1365    -27.440   3.226  51.388  1.00 25.49
ATOM   9220  OG   SER  1365    -27.711   3.713  50.085  1.00 30.28
ATOM   9221  C    SER  1365    -26.288   1.225  50.436  1.00 20.66
ATOM   9222  O    SER  1365    -26.581   0.731  49.343  1.00 17.79
ATOM   9223  N    ASP  1366    -25.033   1.397  50.841  1.00 19.04
ATOM   9224  CA   ASP  1366    -23.902   0.971  50.013  1.00 18.22
ATOM   9225  CB   ASP  1366    -22.564   1.389  50.645  1.00 19.61
ATOM   9226  CG   ASP  1366    -22.294   2.890  50.553  1.00 20.96
ATOM   9227  OD1  ASP  1366    -22.831   3.569  49.652  1.00 20.14
ATOM   9228  OD2  ASP  1366    -21.508   3.393  51.384  1.00 19.72
ATOM   9229  C    ASP  1366    -23.914  -0.547  49.824  1.00 16.69
ATOM   9230  O    ASP  1366    -23.643  -1.040  48.728  1.00 18.02
ATOM   9231  N    ALA  1367    -24.216  -1.291  50.885  1.00 15.72
ATOM   9232  CA   ALA  1367    -24.244  -2.748  50.783  1.00 16.03
ATOM   9233  CB   ALA  1367    -24.598  -3.372  52.136  1.00 16.32
ATOM   9234  C    ALA  1367    -25.245  -3.181  49.717  1.00 17.08
ATOM   9235  O    ALA  1367    -24.944  -4.032  48.878  1.00 15.80
ATOM   9236  N    LEU  1368    -26.436  -2.588  49.745  1.00 16.63
ATOM   9237  CA   LEU  1368    -27.473  -2.902  48.759  1.00 15.83
ATOM   9238  CB   LEU  1368    -28.775  -2.201  49.131  1.00 17.90
ATOM   9239  CG   LEU  1368    -29.457  -2.782  50.363  1.00 18.04
ATOM   9240  CD1  LEU  1368    -30.451  -1.771  50.910  1.00 22.56
ATOM   9241  CD2  LEU  1368    -30.137  -4.097  49.992  1.00 18.80
ATOM   9242  C    LEU  1368    -27.060  -2.475  47.360  1.00 15.44
ATOM   9243  O    LEU  1368    -27.309  -3.189  46.390  1.00 17.08
ATOM   9244  N    ALA  1369    -26.437  -1.304  47.265  1.00 15.14
ATOM   9245  CA   ALA  1369    -25.985  -0.781  45.984  1.00 15.71
ATOM   9246  CB   ALA  1369    -25.393   0.609  46.164  1.00 16.16
ATOM   9247  C    ALA  1369    -24.948  -1.714  45.372  1.00 15.06
ATOM   9248  O    ALA  1369    -24.979  -1.985  44.172  1.00 13.93
ATOM   9249  N    LEU  1370    -24.025  -2.201  46.196  1.00 15.56
ATOM   9250  CA   LEU  1370    -22.990  -3.106  45.702  1.00 15.57
ATOM   9251  CB   LEU  1370    -21.962  -3.389  46.805  1.00 17.04
ATOM   9252  CG   LEU  1370    -21.115  -2.176  47.231  1.00 17.64
ATOM   9253  CD1  LEU  1370    -20.257  -2.520  48.450  1.00 14.36
ATOM   9254  CD2  LEU  1370    -20.236  -1.745  46.077  1.00 17.55
ATOM   9255  C    LEU  1370    -23.639  -4.395  45.228  1.00 16.16
ATOM   9256  O    LEU  1370    -23.306  -4.917  44.160  1.00 14.48
ATOM   9257  N    GLU  1371    -24.573  -4.912  46.020  1.00 15.93
ATOM   9258  CA   GLU  1371    -25.269  -6.142  45.647  1.00 16.46
ATOM   9259  CB   GLU  1371    -26.264  -6.540  46.745  1.00 17.16
ATOM   9260  CG   GLU  1371    -27.134  -7.735  46.381  1.00 20.30
ATOM   9261  CD   GLU  1371    -28.084  -8.098  47.491  1.00 19.27
ATOM   9262  OE1  GLU  1371    -28.878  -7.224  47.897  1.00 18.29
ATOM   9263  OE2  GLU  1371    -28.029  -9.248  47.964  1.00 23.87
ATOM   9264  C    GLU  1371    -26.007  -5.960  44.319  1.00 16.54
ATOM   9265  O    GLU  1371    -25.894  -6.789  43.409  1.00 16.17
ATOM   9266  N    ALA  1372    -26.757  -4.869  44.205  1.00 16.06
ATOM   9267  CA   ALA  1372    -27.516  -4.601  42.987  1.00 16.73
ATOM   9268  CB   ALA  1372    -28.354  -3.328  43.161  1.00 16.45
```

```
ATOM   9269  C   ALA  1372   -26.585  -4.460  41.790  1.00 16.56
ATOM   9270  O   ALA  1372   -26.953  -4.791  40.660  1.00 15.51
ATOM   9271  N   ALA  1373   -25.377  -3.961  42.044  1.00 14.61
ATOM   9272  CA  ALA  1373   -24.382  -3.758  40.987  1.00 14.87
ATOM   9273  CB  ALA  1373   -23.253  -2.858  41.507  1.00 15.59
ATOM   9274  C   ALA  1373   -23.804  -5.077  40.477  1.00 14.66
ATOM   9275  O   ALA  1373   -23.232  -5.133  39.386  1.00 15.82
ATOM   9276  N   GLY  1374   -23.935  -6.132  41.273  1.00 14.12
ATOM   9277  CA  GLY  1374   -23.427  -7.423  40.846  1.00 14.74
ATOM   9278  C   GLY  1374   -22.460  -8.120  41.789  1.00 15.58
ATOM   9279  O   GLY  1374   -22.046  -9.250  41.513  1.00 17.25
ATOM   9280  N   ALA  1375   -22.081  -7.468  42.888  1.00 15.59
ATOM   9281  CA  ALA  1375   -21.167  -8.098  43.847  1.00 15.31
ATOM   9282  CB  ALA  1375   -20.901  -7.167  45.031  1.00 12.55
ATOM   9283  C   ALA  1375   -21.815  -9.390  44.336  1.00 15.80
ATOM   9284  O   ALA  1375   -23.000  -9.408  44.659  1.00 17.75
ATOM   9285  N   GLN  1376   -21.041 -10.469  44.393  1.00 16.08
ATOM   9286  CA  GLN  1376   -21.584 -11.756  44.825  1.00 16.60
ATOM   9287  CB  GLN  1376   -21.090 -12.857  43.887  1.00 16.95
ATOM   9288  CG  GLN  1376   -21.526 -12.625  42.441  1.00 22.74
ATOM   9289  CD  GLN  1376   -20.999 -13.668  41.484  1.00 24.07
ATOM   9290  OE1 GLN  1376   -21.457 -14.809  41.477  1.00 29.42
ATOM   9291  NE2 GLN  1376   -20.030 -13.281  40.665  1.00 27.21
ATOM   9292  C   GLN  1376   -21.217 -12.076  46.269  1.00 17.00
ATOM   9293  O   GLN  1376   -21.664 -13.079  46.829  1.00 17.05
ATOM   9294  N   LEU  1377   -20.411 -11.199  46.860  1.00 14.88
ATOM   9295  CA  LEU  1377   -19.958 -11.337  48.232  1.00 16.52
ATOM   9296  CB  LEU  1377   -18.675 -12.164  48.280  1.00 21.20
ATOM   9297  CG  LEU  1377   -18.797 -13.672  48.435  1.00 22.45
ATOM   9298  CD1 LEU  1377   -17.441 -14.317  48.174  1.00 22.86
ATOM   9299  CD2 LEU  1377   -19.279 -13.991  49.840  1.00 22.77
ATOM   9300  C   LEU  1377   -19.674  -9.964  48.807  1.00 15.17
ATOM   9301  O   LEU  1377   -19.404  -9.017  48.068  1.00 15.26
ATOM   9302  N   LEU  1378   -19.734  -9.856  50.129  1.00 15.03
ATOM   9303  CA  LEU  1378   -19.445  -8.588  50.792  1.00 15.26
ATOM   9304  CB  LEU  1378   -20.750  -7.840  51.099  1.00 15.07
ATOM   9305  CG  LEU  1378   -20.584  -6.620  52.011  1.00 15.89
ATOM   9306  CD1 LEU  1378   -19.891  -5.491  51.246  1.00 17.24
ATOM   9307  CD2 LEU  1378   -21.961  -6.154  52.507  1.00 19.57
ATOM   9308  C   LEU  1378   -18.679  -8.808  52.090  1.00 15.81
ATOM   9309  O   LEU  1378   -19.048  -9.656  52.900  1.00 16.07
ATOM   9310  N   VAL  1379   -17.599  -8.060  52.282  1.00 16.13
ATOM   9311  CA  VAL  1379   -16.845  -8.160  53.523  1.00 16.26
ATOM   9312  CB  VAL  1379   -15.297  -8.136  53.275  1.00 14.82
ATOM   9313  CG1 VAL  1379   -14.567  -7.886  54.588  1.00 14.92
ATOM   9314  CG2 VAL  1379   -14.830  -9.493  52.691  1.00 13.84
ATOM   9315  C   VAL  1379   -17.245  -6.955  54.383  1.00 16.23
ATOM   9316  O   VAL  1379   -17.366  -5.838  53.876  1.00 14.40
ATOM   9317  N   LEU  1380   -17.502  -7.200  55.667  1.00 17.52
ATOM   9318  CA  LEU  1380   -17.869  -6.150  56.626  1.00 18.33
ATOM   9319  CB  LEU  1380   -19.228  -6.426  57.264  1.00 23.25
ATOM   9320  CG  LEU  1380   -20.451  -5.763  56.649  1.00 27.26
ATOM   9321  CD1 LEU  1380   -21.679  -6.205  57.436  1.00 29.17
ATOM   9322  CD2 LEU  1380   -20.310  -4.237  56.689  1.00 28.64
ATOM   9323  C   LEU  1380   -16.820  -6.151  57.729  1.00 17.93
ATOM   9324  O   LEU  1380   -16.671  -7.142  58.438  1.00 17.27
ATOM   9325  N   GLU  1381   -16.126  -5.032  57.901  1.00 18.24
ATOM   9326  CA  GLU  1381   -15.058  -4.951  58.890  1.00 18.15
ATOM   9327  CB  GLU  1381   -13.735  -4.706  58.154  1.00 19.99
ATOM   9328  CG  GLU  1381   -12.535  -4.399  59.042  1.00 19.58
ATOM   9329  CD  GLU  1381   -11.214  -4.485  58.288  1.00 21.41
ATOM   9330  OE1 GLU  1381   -11.236  -4.456  57.042  1.00 20.29
ATOM   9331  OE2 GLU  1381   -10.152  -4.579  58.939  1.00 22.00
ATOM   9332  C   GLU  1381   -15.222  -3.910  59.995  1.00 18.95
ATOM   9333  O   GLU  1381   -15.451  -2.733  59.725  1.00 17.56
ATOM   9334  N   CYS  1382   -15.094  -4.355  61.242  1.00 18.95
ATOM   9335  CA  CYS  1382   -15.168  -3.456  62.388  1.00 20.18
ATOM   9336  CB  CYS  1382   -13.858  -2.676  62.501  1.00 20.94
ATOM   9337  SG  CYS  1382   -12.444  -3.736  62.885  1.00 25.87
ATOM   9338  C   CYS  1382   -16.344  -2.488  62.383  1.00 19.45
ATOM   9339  O   CYS  1382   -16.181  -1.279  62.191  1.00 19.01
ATOM   9340  N   VAL  1383   -17.523  -3.038  62.631  1.00 20.89
ATOM   9341  CA  VAL  1383   -18.753  -2.272  62.665  1.00 21.85
ATOM   9342  CB  VAL  1383   -19.513  -2.440  61.324  1.00 23.50
ATOM   9343  CG1 VAL  1383   -20.222  -3.785  61.286  1.00 18.79
ATOM   9344  CG2 VAL  1383   -20.471  -1.295  61.113  1.00 26.50
ATOM   9345  C   VAL  1383   -19.576  -2.863  63.809  1.00 22.30
```

```
ATOM   9346  O    VAL  1383    -19.434   -4.042   64.131  1.00 22.63
ATOM   9347  N    PRO  1384    -20.432   -2.050   64.454  1.00 22.70
ATOM   9348  CD   PRO  1384    -20.747   -0.631   64.237  1.00 21.90
ATOM   9349  CA   PRO  1384    -21.231   -2.608   65.548  1.00 23.71
ATOM   9350  CB   PRO  1384    -22.140   -1.441   65.952  1.00 24.27
ATOM   9351  CG   PRO  1384    -22.162   -0.556   64.735  1.00 26.55
ATOM   9352  C    PRO  1384    -22.009   -3.841   65.101  1.00 24.45
ATOM   9353  O    PRO  1384    -22.470   -3.914   63.961  1.00 23.74
ATOM   9354  N    VAL  1385    -22.140   -4.808   66.003  1.00 24.71
ATOM   9355  CA   VAL  1385    -22.856   -6.050   65.727  1.00 26.23
ATOM   9356  CB   VAL  1385    -22.984   -6.917   66.991  1.00 27.89
ATOM   9357  CG1  VAL  1385    -23.606   -8.261   66.632  1.00 27.76
ATOM   9358  CG2  VAL  1385    -21.626   -7.101   67.635  1.00 29.95
ATOM   9359  C    VAL  1385    -24.263   -5.783   65.219  1.00 27.91
ATOM   9360  O    VAL  1385    -24.772   -6.513   64.366  1.00 27.26
ATOM   9361  N    GLU  1386    -24.884   -4.734   65.754  1.00 27.87
ATOM   9362  CA   GLU  1386    -26.241   -4.372   65.367  1.00 30.32
ATOM   9363  CB   GLU  1386    -26.717   -3.129   66.133  1.00 31.48
ATOM   9364  CG   GLU  1386    -26.182   -2.988   67.553  1.00 37.12
ATOM   9365  CD   GLU  1386    -26.077   -4.309   68.280  1.00 39.44
ATOM   9366  OE1  GLU  1386    -27.084   -5.051   68.325  1.00 42.32
ATOM   9367  OE2  GLU  1386    -24.984   -4.599   68.810  1.00 40.64
ATOM   9368  C    GLU  1386    -26.291   -4.088   63.872  1.00 29.04
ATOM   9369  O    GLU  1386    -27.157   -4.601   63.168  1.00 29.05
ATOM   9370  N    LEU  1387    -25.353   -3.271   63.396  1.00 27.86
ATOM   9371  CA   LEU  1387    -25.290   -2.912   61.982  1.00 26.77
ATOM   9372  CB   LEU  1387    -24.193   -1.870   61.740  1.00 29.38
ATOM   9373  CG   LEU  1387    -24.497   -0.767   60.722  1.00 31.48
ATOM   9374  CD1  LEU  1387    -23.294    0.148   60.577  1.00 29.59
ATOM   9375  CD2  LEU  1387    -24.876   -1.369   59.391  1.00 33.03
ATOM   9376  C    LEU  1387    -25.019   -4.148   61.128  1.00 26.22
ATOM   9377  O    LEU  1387    -25.637   -4.338   60.079  1.00 24.83
ATOM   9378  N    ALA  1388    -24.082   -4.982   61.572  1.00 24.74
ATOM   9379  CA   ALA  1388    -23.758   -6.199   60.846  1.00 23.61
ATOM   9380  CB   ALA  1388    -22.736   -7.022   61.625  1.00 21.94
ATOM   9381  C    ALA  1388    -25.041   -7.002   60.648  1.00 23.83
ATOM   9382  O    ALA  1388    -25.301   -7.517   59.560  1.00 20.30
ATOM   9383  N    LYS  1389    -25.844   -7.096   61.705  1.00 25.43
ATOM   9384  CA   LYS  1389    -27.114   -7.824   61.656  1.00 27.87
ATOM   9385  CB   LYS  1389    -27.853   -7.694   62.992  1.00 32.12
ATOM   9386  CG   LYS  1389    -27.057   -8.133   64.203  1.00 38.20
ATOM   9387  CD   LYS  1389    -27.773   -7.773   65.500  1.00 41.46
ATOM   9388  CE   LYS  1389    -26.986   -8.255   66.710  1.00 43.04
ATOM   9389  NZ   LYS  1389    -27.588   -7.817   67.999  1.00 44.99
ATOM   9390  C    LYS  1389    -27.999   -7.252   60.556  1.00 26.60
ATOM   9391  O    LYS  1389    -28.522   -7.984   59.716  1.00 26.86
ATOM   9392  N    ARG  1390    -28.160   -5.932   60.580  1.00 26.01
ATOM   9393  CA   ARG  1390    -28.980   -5.216   59.608  1.00 25.62
ATOM   9394  CB   ARG  1390    -28.846   -3.704   59.830  1.00 28.15
ATOM   9395  CG   ARG  1390    -28.910   -3.255   61.284  1.00 33.06
ATOM   9396  CD   ARG  1390    -30.061   -2.299   61.530  1.00 31.58
ATOM   9397  NE   ARG  1390    -30.047   -1.150   60.627  1.00 34.15
ATOM   9398  CZ   ARG  1390    -29.289   -0.068   60.782  1.00 33.40
ATOM   9399  NH1  ARG  1390    -28.466    0.031   61.818  1.00 35.42
ATOM   9400  NH2  ARG  1390    -29.361    0.924   59.901  1.00 33.81
ATOM   9401  C    ARG  1390    -28.566   -5.541   58.175  1.00 24.93
ATOM   9402  O    ARG  1390    -29.394   -5.896   57.332  1.00 21.80
ATOM   9403  N    ILE  1391    -27.271   -5.407   57.904  1.00 24.32
ATOM   9404  CA   ILE  1391    -26.736   -5.663   56.570  1.00 23.53
ATOM   9405  CB   ILE  1391    -25.248   -5.277   56.501  1.00 24.79
ATOM   9406  CG2  ILE  1391    -24.677   -5.627   55.130  1.00 22.88
ATOM   9407  CG1  ILE  1391    -25.098   -3.779   56.789  1.00 24.38
ATOM   9408  CD1  ILE  1391    -23.661   -3.314   56.863  1.00 30.37
ATOM   9409  C    ILE  1391    -26.900   -7.114   56.125  1.00 23.92
ATOM   9410  O    ILE  1391    -27.323   -7.383   55.001  1.00 22.87
ATOM   9411  N    THR  1392    -26.570   -8.053   57.003  1.00 23.07
ATOM   9412  CA   THR  1392    -26.691   -9.463   56.654  1.00 24.09
ATOM   9413  CB   THR  1392    -26.165  -10.362   57.801  1.00 25.31
ATOM   9414  OG1  THR  1392    -24.790  -10.043   58.052  1.00 24.75
ATOM   9415  CG2  THR  1392    -26.263  -11.842   57.424  1.00 21.60
ATOM   9416  C    THR  1392    -28.133   -9.844   56.309  1.00 25.62
ATOM   9417  O    THR  1392    -28.371  -10.658   55.411  1.00 24.15
ATOM   9418  N    GLU  1393    -29.095   -9.253   57.013  1.00 25.81
ATOM   9419  CA   GLU  1393    -30.505   -9.540   56.754  1.00 28.50
ATOM   9420  CB   GLU  1393    -31.358   -9.159   57.966  1.00 30.65
ATOM   9421  CG   GLU  1393    -31.271  -10.140   59.124  1.00 35.02
ATOM   9422  CD   GLU  1393    -32.129   -9.716   60.300  1.00 38.65
```

```
ATOM   9423  OE1 GLU  1393    -33.335  -9.449  60.089  1.00 40.37
ATOM   9424  OE2 GLU  1393    -31.602  -9.652  61.435  1.00 39.76
ATOM   9425  C   GLU  1393    -31.038  -8.818  55.520  1.00 27.06
ATOM   9426  O   GLU  1393    -31.907  -9.337  54.820  1.00 28.64
ATOM   9427  N   ALA  1394    -30.515  -7.627  55.254  1.00 24.47
ATOM   9428  CA  ALA  1394    -30.961  -6.847  54.110  1.00 24.04
ATOM   9429  CB  ALA  1394    -30.508  -5.394  54.265  1.00 22.66
ATOM   9430  C   ALA  1394    -30.467  -7.411  52.782  1.00 24.13
ATOM   9431  O   ALA  1394    -31.165  -7.322  51.768  1.00 22.55
ATOM   9432  N   LEU  1395    -29.270  -7.995  52.790  1.00 23.16
ATOM   9433  CA  LEU  1395    -28.682  -8.551  51.571  1.00 22.35
ATOM   9434  CB  LEU  1395    -27.169  -8.307  51.557  1.00 23.06
ATOM   9435  CG  LEU  1395    -26.678  -6.859  51.608  1.00 24.33
ATOM   9436  CD1 LEU  1395    -25.165  -6.854  51.357  1.00 23.88
ATOM   9437  CD2 LEU  1395    -27.386  -6.016  50.579  1.00 26.78
ATOM   9438  C   LEU  1395    -28.939 -10.036  51.352  1.00 20.89
ATOM   9439  O   LEU  1395    -28.995 -10.815  52.298  1.00 20.06
ATOM   9440  N   ALA  1396    -29.091 -10.416  50.085  1.00 20.42
ATOM   9441  CA  ALA  1396    -29.330 -11.805  49.716  1.00 21.29
ATOM   9442  CB  ALA  1396    -30.126 -11.871  48.413  1.00 19.07
ATOM   9443  C   ALA  1396    -28.005 -12.548  49.552  1.00 20.66
ATOM   9444  O   ALA  1396    -27.916 -13.753  49.809  1.00 19.21
ATOM   9445  N   ILE  1397    -26.976 -11.823  49.116  1.00 19.78
ATOM   9446  CA  ILE  1397    -25.650 -12.405  48.933  1.00 20.20
ATOM   9447  CB  ILE  1397    -24.721 -11.463  48.134  1.00 19.10
ATOM   9448  CG2 ILE  1397    -25.280 -11.237  46.742  1.00 19.43
ATOM   9449  CG1 ILE  1397    -24.561 -10.139  48.875  1.00 17.71
ATOM   9450  CD1 ILE  1397    -23.568  -9.181  48.227  1.00 18.82
ATOM   9451  C   ILE  1397    -25.020 -12.649  50.299  1.00 20.56
ATOM   9452  O   ILE  1397    -25.389 -12.008  51.282  1.00 21.78
ATOM   9453  N   PRO  1398    -24.066 -13.586  50.381  1.00 22.06
ATOM   9454  CD  PRO  1398    -23.622 -14.529  49.342  1.00 22.24
ATOM   9455  CA  PRO  1398    -23.419 -13.871  51.661  1.00 22.34
ATOM   9456  CB  PRO  1398    -22.633 -15.150  51.373  1.00 23.09
ATOM   9457  CG  PRO  1398    -22.353 -15.057  49.917  1.00 26.50
ATOM   9458  C   PRO  1398    -22.546 -12.728  52.168  1.00 21.87
ATOM   9459  O   PRO  1398    -21.840 -12.075  51.394  1.00 21.73
ATOM   9460  N   VAL  1399    -22.621 -12.479  53.472  1.00 21.04
ATOM   9461  CA  VAL  1399    -21.845 -11.423  54.102  1.00 20.62
ATOM   9462  CB  VAL  1399    -22.750 -10.465  54.918  1.00 21.23
ATOM   9463  CG1 VAL  1399    -21.906  -9.373  55.569  1.00 20.53
ATOM   9464  CG2 VAL  1399    -23.796  -9.833  54.007  1.00 21.96
ATOM   9465  C   VAL  1399    -20.793 -12.033  55.021  1.00 20.44
ATOM   9466  O   VAL  1399    -21.115 -12.798  55.938  1.00 19.55
ATOM   9467  N   ILE  1400    -19.536 -11.694  54.751  1.00 20.90
ATOM   9468  CA  ILE  1400    -18.392 -12.181  55.522  1.00 19.21
ATOM   9469  CB  ILE  1400    -17.218 -12.559  54.590  1.00 20.36
ATOM   9470  CG2 ILE  1400    -16.008 -12.966  55.418  1.00 20.56
ATOM   9471  CG1 ILE  1400    -17.643 -13.705  53.668  1.00 22.22
ATOM   9472  CD1 ILE  1400    -16.590 -14.082  52.643  1.00 24.06
ATOM   9473  C   ILE  1400    -17.924 -11.083  56.462  1.00 19.24
ATOM   9474  O   ILE  1400    -17.585  -9.985  56.026  1.00 17.97
ATOM   9475  N   GLY  1401    -17.898 -11.380  57.754  1.00 17.48
ATOM   9476  CA  GLY  1401    -17.484 -10.368  58.700  1.00 17.76
ATOM   9477  C   GLY  1401    -16.182 -10.615  59.429  1.00 17.82
ATOM   9478  O   GLY  1401    -15.731 -11.746  59.583  1.00 18.37
ATOM   9479  N   ILE  1402    -15.567  -9.519  59.846  1.00 17.14
ATOM   9480  CA  ILE  1402    -14.342  -9.549  60.622  1.00 19.20
ATOM   9481  CB  ILE  1402    -13.061  -9.437  59.731  1.00 17.10
ATOM   9482  CG2 ILE  1402    -13.207  -8.319  58.708  1.00 19.67
ATOM   9483  CG1 ILE  1402    -11.844  -9.222  60.626  1.00 22.25
ATOM   9484  CD1 ILE  1402    -10.521  -9.488  59.939  1.00 21.22
ATOM   9485  C   ILE  1402    -14.477  -8.359  61.562  1.00 17.66
ATOM   9486  O   ILE  1402    -14.489  -7.202  61.134  1.00 21.00
ATOM   9487  N   GLY  1403    -14.616  -8.646  62.849  1.00 18.73
ATOM   9488  CA  GLY  1403    -14.800  -7.572  63.805  1.00 19.62
ATOM   9489  C   GLY  1403    -16.208  -7.017  63.675  1.00 20.89
ATOM   9490  O   GLY  1403    -16.457  -5.837  63.934  1.00 20.69
ATOM   9491  N   ALA  1404    -17.137  -7.871  63.259  1.00 20.95
ATOM   9492  CA  ALA  1404    -18.529  -7.452  63.100  1.00 22.83
ATOM   9493  CB  ALA  1404    -18.881  -7.354  61.614  1.00 24.62
ATOM   9494  C   ALA  1404    -19.502  -8.391  63.807  1.00 24.35
ATOM   9495  O   ALA  1404    -20.706  -8.344  63.558  1.00 24.70
ATOM   9496  N   GLY  1405    -18.980  -9.246  64.685  1.00 24.62
ATOM   9497  CA  GLY  1405    -19.833 -10.170  65.411  1.00 25.54
ATOM   9498  C   GLY  1405    -20.075 -11.478  64.683  1.00 26.30
ATOM   9499  O   GLY  1405    -19.573 -11.681  63.581  1.00 27.10
```

```
ATOM    9500  N   ASN  1406    -20.854 -12.367  65.297  1.00 25.69
ATOM    9501  CA  ASN  1406    -21.149 -13.670  64.701  1.00 25.78
ATOM    9502  CB  ASN  1406    -21.144 -14.756  65.781  1.00 26.59
ATOM    9503  CG  ASN  1406    -22.323 -14.641  66.745  1.00 28.85
ATOM    9504  OD1 ASN  1406    -22.638 -15.586  67.470  1.00 29.88
ATOM    9505  ND2 ASN  1406    -22.972 -13.481  66.760  1.00 25.54
ATOM    9506  C   ASN  1406    -22.481 -13.713  63.952  1.00 24.77
ATOM    9507  O   ASN  1406    -22.956 -14.787  63.579  1.00 25.44
ATOM    9508  N   VAL  1407    -23.071 -12.541  63.725  1.00 24.74
ATOM    9509  CA  VAL  1407    -24.354 -12.434  63.033  1.00 25.37
ATOM    9510  CB  VAL  1407    -25.064 -11.118  63.402  1.00 25.71
ATOM    9511  CG1 VAL  1407    -26.505 -11.144  62.893  1.00 31.10
ATOM    9512  CG2 VAL  1407    -25.040 -10.917  64.913  1.00 27.35
ATOM    9513  C   VAL  1407    -24.224 -12.497  61.512  1.00 25.31
ATOM    9514  O   VAL  1407    -25.223 -12.591  60.790  1.00 24.78
ATOM    9515  N   THR  1408    -22.991 -12.437  61.024  1.00 23.39
ATOM    9516  CA  THR  1408    -22.753 -12.490  59.591  1.00 21.03
ATOM    9517  CB  THR  1408    -21.375 -11.874  59.238  1.00 20.01
ATOM    9518  OG1 THR  1408    -20.354 -12.456  60.064  1.00 19.12
ATOM    9519  CG2 THR  1408    -21.401 -10.382  59.460  1.00 17.17
ATOM    9520  C   THR  1408    -22.813 -13.927  59.104  1.00 21.73
ATOM    9521  O   THR  1408    -22.821 -14.867  59.908  1.00 24.16
ATOM    9522  N   ASP  1409    -22.874 -14.090  57.785  1.00 19.78
ATOM    9523  CA  ASP  1409    -22.942 -15.406  57.157  1.00 19.91
ATOM    9524  CB  ASP  1409    -23.371 -15.268  55.696  1.00 21.36
ATOM    9525  CG  ASP  1409    -24.712 -14.600  55.553  1.00 22.44
ATOM    9526  OD1 ASP  1409    -25.693 -15.136  56.107  1.00 22.97
ATOM    9527  OD2 ASP  1409    -24.786 -13.536  54.899  1.00 25.06
ATOM    9528  C   ASP  1409    -21.600 -16.112  57.211  1.00 19.51
ATOM    9529  O   ASP  1409    -21.533 -17.342  57.236  1.00 18.44
ATOM    9530  N   GLY  1410    -20.534 -15.323  57.219  1.00 21.88
ATOM    9531  CA  GLY  1410    -19.204 -15.899  57.269  1.00 20.44
ATOM    9532  C   GLY  1410    -18.249 -15.097  58.124  1.00 19.85
ATOM    9533  O   GLY  1410    -18.589 -14.013  58.594  1.00 18.97
ATOM    9534  N   GLN  1411    -17.050 -15.643  58.322  1.00 19.88
ATOM    9535  CA  GLN  1411    -16.011 -15.002  59.116  1.00 20.00
ATOM    9536  CB  GLN  1411    -15.817 -15.730  60.447  1.00 19.91
ATOM    9537  CG  GLN  1411    -16.981 -15.636  61.417  1.00 19.40
ATOM    9538  CD  GLN  1411    -17.301 -14.209  61.801  1.00 16.91
ATOM    9539  OE1 GLN  1411    -16.414 -13.434  62.153  1.00 18.73
ATOM    9540  NE2 GLN  1411    -18.578 -13.859  61.752  1.00 18.43
ATOM    9541  C   GLN  1411    -14.676 -15.014  58.382  1.00 20.57
ATOM    9542  O   GLN  1411    -14.421 -15.889  57.558  1.00 19.66
ATOM    9543  N   ILE  1412    -13.824 -14.046  58.697  1.00 22.26
ATOM    9544  CA  ILE  1412    -12.501 -13.973  58.097  1.00 23.53
ATOM    9545  CB  ILE  1412    -12.530 -13.154  56.776  1.00 23.95
ATOM    9546  CG2 ILE  1412    -12.737 -11.675  57.075  1.00 24.56
ATOM    9547  CG1 ILE  1412    -11.227 -13.360  56.010  1.00 25.80
ATOM    9548  CD1 ILE  1412    -11.316 -12.973  54.543  1.00 25.24
ATOM    9549  C   ILE  1412    -11.536 -13.335  59.097  1.00 25.52
ATOM    9550  O   ILE  1412    -11.952 -12.627  60.014  1.00 23.69
ATOM    9551  N   LEU  1413    -10.248 -13.607  58.933  1.00 27.48
ATOM    9552  CA  LEU  1413     -9.243 -13.032  59.815  1.00 28.85
ATOM    9553  CB  LEU  1413     -9.351 -13.635  61.216  1.00 34.02
ATOM    9554  CG  LEU  1413     -9.299 -12.665  62.403  1.00 37.41
ATOM    9555  CD1 LEU  1413     -9.200 -13.472  63.680  1.00 39.43
ATOM    9556  CD2 LEU  1413     -8.100 -11.718  62.283  1.00 39.02
ATOM    9557  C   LEU  1413     -7.863 -13.315  59.243  1.00 28.57
ATOM    9558  O   LEU  1413     -7.692 -14.259  58.470  1.00 25.03
ATOM    9559  N   VAL  1414     -6.890 -12.485  59.610  1.00 29.11
ATOM    9560  CA  VAL  1414     -5.520 -12.662  59.147  1.00 29.08
ATOM    9561  CB  VAL  1414     -4.638 -11.435  59.483  1.00 30.55
ATOM    9562  CG1 VAL  1414     -3.238 -11.628  58.900  1.00 31.68
ATOM    9563  CG2 VAL  1414     -5.277 -10.165  58.928  1.00 31.09
ATOM    9564  C   VAL  1414     -4.961 -13.880  59.863  1.00 28.58
ATOM    9565  O   VAL  1414     -4.936 -13.928  61.092  1.00 28.63
ATOM    9566  N   MET  1415     -4.525 -14.865  59.087  1.00 26.58
ATOM    9567  CA  MET  1415     -3.976 -16.096  59.644  1.00 25.18
ATOM    9568  CB  MET  1415     -3.386 -16.959  58.527  1.00 21.68
ATOM    9569  CG  MET  1415     -2.253 -16.306  57.777  1.00 20.54
ATOM    9570  SD  MET  1415     -1.043 -17.545  57.300  1.00 21.74
ATOM    9571  CE  MET  1415     -0.091 -17.623  58.832  1.00 21.73
ATOM    9572  C   MET  1415     -2.912 -15.850  60.713  1.00 25.50
ATOM    9573  O   MET  1415     -2.793 -16.614  61.671  1.00 25.46
ATOM    9574  N   HIS  1416     -2.144 -14.778  60.548  1.00 25.98
ATOM    9575  CA  HIS  1416     -1.089 -14.440  61.496  1.00 27.03
ATOM    9576  CB  HIS  1416     -0.294 -13.242  60.974  1.00 26.14
```

```
ATOM   9577  CG   HIS  1416     0.482 -13.542  59.726  1.00 26.99
ATOM   9578  CD2  HIS  1416     0.121 -13.513  58.421  1.00 25.19
ATOM   9579  ND1  HIS  1416     1.782 -14.002  59.750  1.00 25.73
ATOM   9580  CE1  HIS  1416     2.188 -14.243  58.517  1.00 24.78
ATOM   9581  NE2  HIS  1416     1.198 -13.954  57.690  1.00 27.44
ATOM   9582  C    HIS  1416    -1.651 -14.163  62.889  1.00 28.75
ATOM   9583  O    HIS  1416    -1.076 -14.598  63.887  1.00 27.94
ATOM   9584  N    ASP  1417    -2.773 -13.449  62.966  1.00 29.75
ATOM   9585  CA   ASP  1417    -3.386 -13.156  64.262  1.00 33.00
ATOM   9586  CB   ASP  1417    -4.458 -12.069  64.134  1.00 34.18
ATOM   9587  CG   ASP  1417    -3.886 -10.733  63.731  1.00 37.67
ATOM   9588  OD1  ASP  1417    -2.900 -10.292  64.361  1.00 39.25
ATOM   9589  OD2  ASP  1417    -4.429 -10.114  62.788  1.00 40.11
ATOM   9590  C    ASP  1417    -4.025 -14.408  64.848  1.00 33.09
ATOM   9591  O    ASP  1417    -4.130 -14.549  66.067  1.00 34.61
ATOM   9592  N    ALA  1418    -4.455 -15.312  63.974  1.00 34.01
ATOM   9593  CA   ALA  1418    -5.094 -16.552  64.399  1.00 35.06
ATOM   9594  CB   ALA  1418    -5.800 -17.207  63.208  1.00 34.52
ATOM   9595  C    ALA  1418    -4.110 -17.535  65.034  1.00 36.11
ATOM   9596  O    ALA  1418    -4.524 -18.505  65.671  1.00 36.84
ATOM   9597  N    PHE  1419    -2.813 -17.287  64.863  1.00 36.18
ATOM   9598  CA   PHE  1419    -1.791 -18.161  65.436  1.00 36.22
ATOM   9599  CB   PHE  1419    -0.999 -18.849  64.322  1.00 37.87
ATOM   9600  CG   PHE  1419    -1.861 -19.607  63.349  1.00 39.07
ATOM   9601  CD1  PHE  1419    -2.859 -20.465  63.806  1.00 38.80
ATOM   9602  CD2  PHE  1419    -1.671 -19.472  61.978  1.00 39.70
ATOM   9603  CE1  PHE  1419    -3.654 -21.176  62.914  1.00 39.60
ATOM   9604  CE2  PHE  1419    -2.461 -20.180  61.075  1.00 39.92
ATOM   9605  CZ   PHE  1419    -3.456 -21.035  61.546  1.00 40.35
ATOM   9606  C    PHE  1419    -0.838 -17.412  66.369  1.00 35.97
ATOM   9607  O    PHE  1419     0.267 -17.880  66.660  1.00 35.74
ATOM   9608  N    GLY  1420    -1.278 -16.245  66.832  1.00 35.56
ATOM   9609  CA   GLY  1420    -0.472 -15.444  67.739  1.00 34.95
ATOM   9610  C    GLY  1420     0.900 -15.079  67.205  1.00 34.01
ATOM   9611  O    GLY  1420     1.762 -14.622  67.960  1.00 33.90
ATOM   9612  N    ILE  1421     1.112 -15.278  65.908  1.00 31.41
ATOM   9613  CA   ILE  1421     2.394 -14.950  65.299  1.00 28.98
ATOM   9614  CB   ILE  1421     2.423 -15.367  63.804  1.00 28.18
ATOM   9615  CG2  ILE  1421     3.732 -14.925  63.156  1.00 24.57
ATOM   9616  CG1  ILE  1421     2.264 -16.880  63.689  1.00 26.51
ATOM   9617  CD1  ILE  1421     2.034 -17.371  62.278  1.00 26.39
ATOM   9618  C    ILE  1421     2.626 -13.447  65.411  1.00 29.18
ATOM   9619  O    ILE  1421     3.716 -12.999  65.761  1.00 27.59
ATOM   9620  N    THR  1422     1.577 -12.676  65.143  1.00 30.56
ATOM   9621  CA   THR  1422     1.654 -11.222  65.195  1.00 33.09
ATOM   9622  CB   THR  1422     0.315 -10.585  64.796  1.00 34.07
ATOM   9623  OG1  THR  1422    -0.711 -11.042  65.685  1.00 35.73
ATOM   9624  CG2  THR  1422    -0.045 -10.961  63.372  1.00 31.21
ATOM   9625  C    THR  1422     2.055 -10.658  66.552  1.00 35.46
ATOM   9626  O    THR  1422     1.761 -11.245  67.594  1.00 33.19
ATOM   9627  N    GLY  1423     2.716  -9.503  66.502  1.00 38.12
ATOM   9628  CA   GLY  1423     3.187  -8.802  67.682  1.00 42.38
ATOM   9629  C    GLY  1423     2.958  -9.491  69.005  1.00 44.65
ATOM   9630  O    GLY  1423     3.540 -10.541  69.273  1.00 47.25
ATOM   9631  N    GLY  1424     2.113  -8.894  69.838  1.00 45.54
ATOM   9632  CA   GLY  1424     1.826  -9.478  71.133  1.00 46.73
ATOM   9633  C    GLY  1424     0.367  -9.366  71.525  1.00 47.44
ATOM   9634  O    GLY  1424    -0.242 -10.347  71.953  1.00 48.03
ATOM   9635  N    HIS  1425    -0.202  -8.174  71.378  1.00 47.09
ATOM   9636  CA   HIS  1425    -1.597  -7.968  71.745  1.00 48.66
ATOM   9637  CB   HIS  1425    -1.732  -6.705  72.598  1.00 50.45
ATOM   9638  CG   HIS  1425    -2.977  -6.666  73.427  1.00 52.26
ATOM   9639  CD2  HIS  1425    -3.834  -5.654  73.701  1.00 53.70
ATOM   9640  ND1  HIS  1425    -3.434  -7.756  74.136  1.00 53.03
ATOM   9641  CE1  HIS  1425    -4.518  -7.418  74.812  1.00 52.99
ATOM   9642  NE2  HIS  1425    -4.781  -6.148  74.566  1.00 54.24
ATOM   9643  C    HIS  1425    -2.485  -7.868  70.511  1.00 47.46
ATOM   9644  O    HIS  1425    -2.627  -6.802  69.917  1.00 46.90
ATOM   9645  N    ILE  1426    -3.078  -8.993  70.129  1.00 47.14
ATOM   9646  CA   ILE  1426    -3.942  -9.039  68.960  1.00 46.99
ATOM   9647  CB   ILE  1426    -4.374 -10.485  68.648  1.00 47.44
ATOM   9648  CG2  ILE  1426    -3.160 -11.313  68.259  1.00 49.26
ATOM   9649  CG1  ILE  1426    -5.069 -11.098  69.860  1.00 47.01
ATOM   9650  CD1  ILE  1426    -5.604 -12.486  69.606  1.00 47.10
ATOM   9651  C    ILE  1426    -5.184  -8.177  69.148  1.00 45.31
ATOM   9652  O    ILE  1426    -5.532  -7.801  70.271  1.00 45.25
ATOM   9653  N    PRO  1427    -5.868  -7.844  68.043  1.00 44.13
```

```
ATOM   9654  CD  PRO  1427     -5.581  -8.236  66.652  1.00 43.74
ATOM   9655  CA  PRO  1427     -7.078  -7.020  68.112  1.00 42.56
ATOM   9656  CB  PRO  1427     -7.414  -6.784  66.642  1.00 42.85
ATOM   9657  CG  PRO  1427     -6.925  -8.038  65.989  1.00 44.37
ATOM   9658  C   PRO  1427     -8.212  -7.703  68.870  1.00 40.69
ATOM   9659  O   PRO  1427     -8.274  -8.928  68.941  1.00 39.71
ATOM   9660  N   LYS  1428     -9.105  -6.899  69.436  1.00 39.55
ATOM   9661  CA  LYS  1428    -10.238  -7.422  70.189  1.00 38.02
ATOM   9662  CB  LYS  1428    -11.155  -6.274  70.631  1.00 40.74
ATOM   9663  CG  LYS  1428    -10.693  -5.483  71.860  1.00 44.43
ATOM   9664  CD  LYS  1428     -9.402  -4.698  71.629  1.00 46.69
ATOM   9665  CE  LYS  1428     -8.168  -5.494  72.046  1.00 47.27
ATOM   9666  NZ  LYS  1428     -6.917  -4.715  71.829  1.00 48.13
ATOM   9667  C   LYS  1428    -11.065  -8.451  69.418  1.00 35.07
ATOM   9668  O   LYS  1428    -11.557  -9.417  69.999  1.00 33.86
ATOM   9669  N   PHE  1429    -11.213  -8.250  68.112  1.00 32.23
ATOM   9670  CA  PHE  1429    -12.014  -9.159  67.293  1.00 28.78
ATOM   9671  CB  PHE  1429    -12.484  -8.430  66.027  1.00 27.62
ATOM   9672  CG  PHE  1429    -11.366  -7.984  65.131  1.00 24.25
ATOM   9673  CD1 PHE  1429    -10.713  -8.895  64.304  1.00 23.47
ATOM   9674  CD2 PHE  1429    -10.962  -6.654  65.116  1.00 22.84
ATOM   9675  CE1 PHE  1429     -9.673  -8.489  63.476  1.00 21.56
ATOM   9676  CE2 PHE  1429     -9.922  -6.237  64.293  1.00 23.95
ATOM   9677  CZ  PHE  1429     -9.276  -7.156  63.469  1.00 24.89
ATOM   9678  C   PHE  1429    -11.314 -10.463  66.914  1.00 28.44
ATOM   9679  O   PHE  1429    -11.952 -11.388  66.424  1.00 26.30
ATOM   9680  N   ALA  1430    -10.008 -10.534  67.149  1.00 28.50
ATOM   9681  CA  ALA  1430     -9.236 -11.726  66.816  1.00 29.62
ATOM   9682  CB  ALA  1430     -7.854 -11.325  66.325  1.00 29.24
ATOM   9683  C   ALA  1430     -9.106 -12.685  67.998  1.00 31.64
ATOM   9684  O   ALA  1430     -9.332 -12.311  69.150  1.00 31.63
ATOM   9685  N   LYS  1431     -8.741 -13.927  67.695  1.00 31.81
ATOM   9686  CA  LYS  1431     -8.561 -14.949  68.712  1.00 32.80
ATOM   9687  CB  LYS  1431     -9.847 -15.759  68.891  1.00 33.38
ATOM   9688  CG  LYS  1431     -9.731 -16.878  69.916  1.00 35.77
ATOM   9689  CD  LYS  1431    -11.042 -17.633  70.055  1.00 36.57
ATOM   9690  CE  LYS  1431    -10.902 -18.805  70.998  1.00 37.40
ATOM   9691  NZ  LYS  1431    -12.189 -19.531  71.174  1.00 38.32
ATOM   9692  C   LYS  1431     -7.420 -15.886  68.331  1.00 33.12
ATOM   9693  O   LYS  1431     -7.379 -16.414  67.213  1.00 32.77
ATOM   9694  N   ASN  1432     -6.496 -16.085  69.266  1.00 31.72
ATOM   9695  CA  ASN  1432     -5.350 -16.962  69.054  1.00 30.83
ATOM   9696  CB  ASN  1432     -4.260 -16.655  70.087  1.00 29.88
ATOM   9697  CG  ASN  1432     -2.995 -17.463  69.860  1.00 28.49
ATOM   9698  OD1 ASN  1432     -3.046 -18.600  69.378  1.00 27.87
ATOM   9699  ND2 ASN  1432     -1.856 -16.889  70.223  1.00 26.41
ATOM   9700  C   ASN  1432     -5.814 -18.403  69.225  1.00 30.31
ATOM   9701  O   ASN  1432     -5.917 -18.893  70.347  1.00 32.09
ATOM   9702  N   PHE  1433     -6.095 -19.078  68.115  1.00 30.31
ATOM   9703  CA  PHE  1433     -6.553 -20.463  68.164  1.00 30.25
ATOM   9704  CB  PHE  1433     -7.293 -20.840  66.878  1.00 31.29
ATOM   9705  CG  PHE  1433     -8.609 -20.144  66.706  1.00 32.82
ATOM   9706  CD1 PHE  1433     -8.682 -18.899  66.095  1.00 32.79
ATOM   9707  CD2 PHE  1433     -9.781 -20.737  67.160  1.00 33.56
ATOM   9708  CE1 PHE  1433     -9.907 -18.254  65.936  1.00 34.13
ATOM   9709  CE2 PHE  1433    -11.007 -20.102  67.007  1.00 34.37
ATOM   9710  CZ  PHE  1433    -11.072 -18.858  66.394  1.00 34.19
ATOM   9711  C   PHE  1433     -5.415 -21.449  68.383  1.00 30.90
ATOM   9712  O   PHE  1433     -5.652 -22.634  68.616  1.00 30.90
ATOM   9713  N   LEU  1434     -4.179 -20.969  68.293  1.00 31.92
ATOM   9714  CA  LEU  1434     -3.034 -21.847  68.501  1.00 33.45
ATOM   9715  CB  LEU  1434     -1.783 -21.276  67.834  1.00 30.12
ATOM   9716  CG  LEU  1434     -0.507 -22.124  67.974  1.00 28.48
ATOM   9717  CD1 LEU  1434     -0.732 -23.515  67.385  1.00 24.04
ATOM   9718  CD2 LEU  1434      0.646 -21.422  67.263  1.00 29.29
ATOM   9719  C   LEU  1434     -2.792 -22.008  69.997  1.00 35.53
ATOM   9720  O   LEU  1434     -2.528 -23.109  70.472  1.00 35.29
ATOM   9721  N   ALA  1435     -2.890 -20.903  70.731  1.00 39.10
ATOM   9722  CA  ALA  1435     -2.685 -20.916  72.175  1.00 43.53
ATOM   9723  CB  ALA  1435     -2.849 -19.512  72.741  1.00 43.69
ATOM   9724  C   ALA  1435     -3.675 -21.864  72.833  1.00 46.59
ATOM   9725  O   ALA  1435     -3.376 -22.480  73.857  1.00 48.64
ATOM   9726  N   GLU  1436     -4.857 -21.974  72.235  1.00 49.35
ATOM   9727  CA  GLU  1436     -5.908 -22.852  72.742  1.00 52.29
ATOM   9728  CB  GLU  1436     -7.250 -22.507  72.085  1.00 54.27
ATOM   9729  CG  GLU  1436     -7.670 -21.046  72.213  1.00 57.48
ATOM   9730  CD  GLU  1436     -8.111 -20.674  73.617  1.00 59.19
```

```
ATOM   9731  OE1 GLU  1436      -7.296 -20.800  74.557  1.00 60.49
ATOM   9732  OE2 GLU  1436      -9.278 -20.251  73.779  1.00 59.69
ATOM   9733  C   GLU  1436      -5.549 -24.300  72.423  1.00 52.82
ATOM   9734  O   GLU  1436      -6.359 -25.208  72.610  1.00 53.16
ATOM   9735  N   THR  1437      -4.334 -24.504  71.926  1.00 53.46
ATOM   9736  CA  THR  1437      -3.855 -25.839  71.582  1.00 53.71
ATOM   9737  CB  THR  1437      -4.497 -26.343  70.268  1.00 54.29
ATOM   9738  OG1 THR  1437      -4.009 -27.658  69.968  1.00 55.02
ATOM   9739  CG2 THR  1437      -4.167 -25.405  69.113  1.00 55.13
ATOM   9740  C   THR  1437      -2.332 -25.849  71.440  1.00 53.32
ATOM   9741  O   THR  1437      -1.632 -25.088  72.113  1.00 53.43
ATOM   9742  N   GLY  1438      -1.822 -26.716  70.571  1.00 51.53
ATOM   9743  CA  GLY  1438      -0.387 -26.798  70.367  1.00 49.87
ATOM   9744  C   GLY  1438      -0.031 -27.262  68.970  1.00 48.04
ATOM   9745  O   GLY  1438       1.117 -27.603  68.690  1.00 48.97
ATOM   9746  N   ASP  1439      -1.023 -27.265  68.088  1.00 45.31
ATOM   9747  CA  ASP  1439      -0.826 -27.699  66.714  1.00 42.62
ATOM   9748  CB  ASP  1439      -1.358 -29.129  66.553  1.00 44.51
ATOM   9749  CG  ASP  1439      -1.261 -29.633  65.132  1.00 46.55
ATOM   9750  OD1 ASP  1439      -2.119 -29.256  64.309  1.00 47.77
ATOM   9751  OD2 ASP  1439      -0.319 -30.402  64.836  1.00 48.59
ATOM   9752  C   ASP  1439      -1.540 -26.747  65.758  1.00 39.71
ATOM   9753  O   ASP  1439      -2.752 -26.552  65.850  1.00 38.19
ATOM   9754  N   ILE  1440      -0.779 -26.150  64.845  1.00 37.29
ATOM   9755  CA  ILE  1440      -1.337 -25.206  63.883  1.00 34.57
ATOM   9756  CB  ILE  1440      -0.268 -24.751  62.861  1.00 33.52
ATOM   9757  CG2 ILE  1440      -0.920 -23.930  61.748  1.00 33.39
ATOM   9758  CG1 ILE  1440       0.800 -23.920  63.572  1.00 32.81
ATOM   9759  CD1 ILE  1440       1.930 -23.460  62.678  1.00 31.48
ATOM   9760  C   ILE  1440      -2.540 -25.774  63.138  1.00 32.97
ATOM   9761  O   ILE  1440      -3.558 -25.097  62.994  1.00 32.77
ATOM   9762  N   ARG  1441      -2.429 -27.012  62.668  1.00 31.92
ATOM   9763  CA  ARG  1441      -3.532 -27.631  61.947  1.00 30.40
ATOM   9764  CB  ARG  1441      -3.114 -28.993  61.389  1.00 30.10
ATOM   9765  CG  ARG  1441      -2.154 -28.897  60.205  1.00 31.94
ATOM   9766  CD  ARG  1441      -1.662 -30.266  59.761  1.00 31.51
ATOM   9767  NE  ARG  1441      -0.801 -30.192  58.580  1.00 31.83
ATOM   9768  CZ  ARG  1441       0.381 -29.583  58.542  1.00 31.78
ATOM   9769  NH1 ARG  1441       0.863 -28.986  59.624  1.00 31.49
ATOM   9770  NH2 ARG  1441       1.086 -29.571  57.418  1.00 31.50
ATOM   9771  C   ARG  1441      -4.730 -27.776  62.869  1.00 30.29
ATOM   9772  O   ARG  1441      -5.881 -27.702  62.432  1.00 30.16
ATOM   9773  N   ALA  1442      -4.459 -27.979  64.155  1.00 29.42
ATOM   9774  CA  ALA  1442      -5.527 -28.115  65.133  1.00 28.31
ATOM   9775  CB  ALA  1442      -4.963 -28.620  66.469  1.00 27.62
ATOM   9776  C   ALA  1442      -6.183 -26.751  65.308  1.00 26.62
ATOM   9777  O   ALA  1442      -7.396 -26.656  65.471  1.00 28.00
ATOM   9778  N   ALA  1443      -5.377 -25.694  65.270  1.00 24.98
ATOM   9779  CA  ALA  1443      -5.903 -24.343  65.411  1.00 24.60
ATOM   9780  CB  ALA  1443      -4.759 -23.330  65.421  1.00 24.64
ATOM   9781  C   ALA  1443      -6.871 -24.043  64.264  1.00 24.55
ATOM   9782  O   ALA  1443      -7.889 -23.373  64.458  1.00 24.61
ATOM   9783  N   VAL  1444      -6.553 -24.547  63.072  1.00 24.06
ATOM   9784  CA  VAL  1444      -7.396 -24.344  61.895  1.00 25.36
ATOM   9785  CB  VAL  1444      -6.738 -24.933  60.620  1.00 25.58
ATOM   9786  CG1 VAL  1444      -7.681 -24.782  59.430  1.00 26.78
ATOM   9787  CG2 VAL  1444      -5.423 -24.217  60.338  1.00 24.41
ATOM   9788  C   VAL  1444      -8.757 -25.002  62.086  1.00 26.13
ATOM   9789  O   VAL  1444      -9.792 -24.378  61.854  1.00 25.38
ATOM   9790  N   ARG  1445      -8.749 -26.262  62.509  1.00 27.76
ATOM   9791  CA  ARG  1445      -9.988 -27.001  62.723  1.00 29.79
ATOM   9792  CB  ARG  1445      -9.688 -28.459  63.088  1.00 30.48
ATOM   9793  CG  ARG  1445      -9.065 -29.272  61.953  1.00 31.74
ATOM   9794  CD  ARG  1445      -9.068 -30.766  62.259  1.00 33.04
ATOM   9795  NE  ARG  1445      -8.249 -31.106  63.424  1.00 34.02
ATOM   9796  CZ  ARG  1445      -6.941 -31.341  63.383  1.00 33.14
ATOM   9797  NH1 ARG  1445      -6.286 -31.278  62.231  1.00 31.44
ATOM   9798  NH2 ARG  1445      -6.288 -31.650  64.495  1.00 33.53
ATOM   9799  C   ARG  1445     -10.846 -26.361  63.809  1.00 30.41
ATOM   9800  O   ARG  1445     -12.070 -26.298  63.685  1.00 29.87
ATOM   9801  N   GLN  1446     -10.205 -25.877  64.868  1.00 31.30
ATOM   9802  CA  GLN  1446     -10.937 -25.246  65.958  1.00 32.71
ATOM   9803  CB  GLN  1446      -9.987 -24.877  67.098  1.00 35.17
ATOM   9804  CG  GLN  1446     -10.699 -24.629  68.420  1.00 39.56
ATOM   9805  CD  GLN  1446      -9.759 -24.160  69.514  1.00 41.33
ATOM   9806  OE1 GLN  1446      -8.609 -24.608  69.599  1.00 42.46
ATOM   9807  NE2 GLN  1446     -10.247 -23.262  70.371  1.00 40.91
```

```
ATOM    9808  C    GLN   1446     -11.632 -23.988  65.440  1.00 31.61
ATOM    9809  O    GLN   1446     -12.792 -23.729  65.755  1.00 30.44
ATOM    9810  N    TYR   1447     -10.907 -23.211  64.643  1.00 31.24
ATOM    9811  CA   TYR   1447     -11.444 -21.981  64.072  1.00 30.17
ATOM    9812  CB   TYR   1447     -10.361 -21.286  63.242  1.00 29.43
ATOM    9813  CG   TYR   1447     -10.865 -20.155  62.374  1.00 28.31
ATOM    9814  CD1  TYR   1447     -11.525 -19.059  62.927  1.00 27.71
ATOM    9815  CE1  TYR   1447     -11.999 -18.023  62.122  1.00 25.98
ATOM    9816  CD2  TYR   1447     -10.689 -20.190  60.990  1.00 28.41
ATOM    9817  CE2  TYR   1447     -11.158 -19.164  60.179  1.00 26.24
ATOM    9818  CZ   TYR   1447     -11.810 -18.087  60.748  1.00 27.37
ATOM    9819  OH   TYR   1447     -12.279 -17.083  59.939  1.00 26.55
ATOM    9820  C    TYR   1447     -12.679 -22.267  63.213  1.00 29.65
ATOM    9821  O    TYR   1447     -13.685 -21.559  63.301  1.00 30.55
ATOM    9822  N    MET   1448     -12.598 -23.309  62.392  1.00 29.56
ATOM    9823  CA   MET   1448     -13.703 -23.702  61.521  1.00 30.34
ATOM    9824  CB   MET   1448     -13.282 -24.878  60.631  1.00 30.01
ATOM    9825  CG   MET   1448     -12.224 -24.529  59.580  1.00 31.10
ATOM    9826  SD   MET   1448     -11.474 -25.991  58.818  1.00 31.68
ATOM    9827  CE   MET   1448     -12.791 -26.527  57.742  1.00 29.90
ATOM    9828  C    MET   1448     -14.935 -24.103  62.327  1.00 30.96
ATOM    9829  O    MET   1448     -16.045 -23.636  62.061  1.00 29.66
ATOM    9830  N    ALA   1449     -14.729 -24.976  63.308  1.00 31.49
ATOM    9831  CA   ALA   1449     -15.814 -25.467  64.152  1.00 32.03
ATOM    9832  CB   ALA   1449     -15.293 -26.567  65.076  1.00 32.34
ATOM    9833  C    ALA   1449     -16.485 -24.369  64.974  1.00 32.12
ATOM    9834  O    ALA   1449     -17.708 -24.350  65.108  1.00 33.68
ATOM    9835  N    GLU   1450     -15.692 -23.460  65.529  1.00 32.10
ATOM    9836  CA   GLU   1450     -16.253 -22.382  66.335  1.00 33.21
ATOM    9837  CB   GLU   1450     -15.154 -21.685  67.141  1.00 34.06
ATOM    9838  CG   GLU   1450     -14.691 -22.482  68.353  1.00 36.22
ATOM    9839  CD   GLU   1450     -13.733 -21.708  69.231  1.00 38.09
ATOM    9840  OE1  GLU   1450     -14.030 -20.539  69.549  1.00 40.42
ATOM    9841  OE2  GLU   1450     -12.685 -22.269  69.615  1.00 41.16
ATOM    9842  C    GLU   1450     -17.023 -21.359  65.508  1.00 32.93
ATOM    9843  O    GLU   1450     -17.956 -20.731  66.010  1.00 31.71
ATOM    9844  N    VAL   1451     -16.636 -21.186  64.246  1.00 31.86
ATOM    9845  CA   VAL   1451     -17.330 -20.241  63.373  1.00 31.03
ATOM    9846  CB   VAL   1451     -16.534 -19.983  62.064  1.00 30.01
ATOM    9847  CG1  VAL   1451     -17.419 -19.275  61.041  1.00 29.75
ATOM    9848  CG2  VAL   1451     -15.312 -19.133  62.367  1.00 28.24
ATOM    9849  C    VAL   1451     -18.713 -20.783  63.017  1.00 31.90
ATOM    9850  O    VAL   1451     -19.705 -20.060  63.094  1.00 32.23
ATOM    9851  N    GLU   1452     -18.766 -22.059  62.639  1.00 31.88
ATOM    9852  CA   GLU   1452     -20.019 -22.704  62.262  1.00 33.73
ATOM    9853  CB   GLU   1452     -19.741 -24.083  61.660  1.00 34.97
ATOM    9854  CG   GLU   1452     -20.993 -24.838  61.243  1.00 38.84
ATOM    9855  CD   GLU   1452     -20.681 -26.118  60.490  1.00 41.04
ATOM    9856  OE1  GLU   1452     -21.632 -26.820  60.088  1.00 42.35
ATOM    9857  OE2  GLU   1452     -19.483 -26.421  60.296  1.00 43.66
ATOM    9858  C    GLU   1452     -20.975 -22.846  63.444  1.00 34.26
ATOM    9859  O    GLU   1452     -22.194 -22.815  63.274  1.00 33.56
ATOM    9860  N    SER   1453     -20.412 -22.996  64.638  1.00 34.47
ATOM    9861  CA   SER   1453     -21.207 -23.145  65.850  1.00 35.91
ATOM    9862  CB   SER   1453     -20.414 -23.918  66.903  1.00 36.48
ATOM    9863  OG   SER   1453     -20.068 -25.205  66.416  1.00 39.52
ATOM    9864  C    SER   1453     -21.608 -21.786  66.414  1.00 35.30
ATOM    9865  O    SER   1453     -22.490 -21.690  67.269  1.00 35.49
ATOM    9866  N    GLY   1454     -20.959 -20.737  65.929  1.00 33.14
ATOM    9867  CA   GLY   1454     -21.267 -19.405  66.407  1.00 32.40
ATOM    9868  C    GLY   1454     -20.441 -19.042  67.624  1.00 31.91
ATOM    9869  O    GLY   1454     -20.491 -17.906  68.100  1.00 31.65
ATOM    9870  N    VAL   1455     -19.680 -20.008  68.132  1.00 32.10
ATOM    9871  CA   VAL   1455     -18.828 -19.781  69.298  1.00 31.24
ATOM    9872  CB   VAL   1455     -17.930 -21.009  69.580  1.00 32.35
ATOM    9873  CG1  VAL   1455     -17.034 -20.735  70.777  1.00 32.27
ATOM    9874  CG2  VAL   1455     -18.787 -22.241  69.820  1.00 33.67
ATOM    9875  C    VAL   1455     -17.939 -18.570  69.033  1.00 30.78
ATOM    9876  O    VAL   1455     -17.739 -17.722  69.905  1.00 30.55
ATOM    9877  N    TYR   1456     -17.410 -18.500  67.815  1.00 28.80
ATOM    9878  CA   TYR   1456     -16.545 -17.401  67.405  1.00 27.94
ATOM    9879  CB   TYR   1456     -15.157 -17.935  67.012  1.00 26.12
ATOM    9880  CG   TYR   1456     -14.226 -16.846  66.531  1.00 23.34
ATOM    9881  CD1  TYR   1456     -13.651 -15.950  67.433  1.00 22.92
ATOM    9882  CE1  TYR   1456     -12.873 -14.883  66.995  1.00 22.74
ATOM    9883  CD2  TYR   1456     -13.989 -16.652  65.169  1.00 24.91
ATOM    9884  CE2  TYR   1456     -13.212 -15.585  64.718  1.00 22.93
```

```
ATOM   9885  CZ   TYR  1456   -12.663 -14.704  65.634  1.00 23.92
ATOM   9886  OH   TYR  1456   -11.936 -13.618  65.204  1.00 24.81
ATOM   9887  C    TYR  1456   -17.155 -16.671  66.208  1.00 27.24
ATOM   9888  O    TYR  1456   -17.610 -17.308  65.259  1.00 27.22
ATOM   9889  N    PRO  1457   -17.178 -15.328  66.242  1.00 28.94
ATOM   9890  CD   PRO  1457   -17.470 -14.508  65.053  1.00 28.55
ATOM   9891  CA   PRO  1457   -16.660 -14.494  67.331  1.00 29.57
ATOM   9892  CB   PRO  1457   -16.370 -13.167  66.638  1.00 29.55
ATOM   9893  CG   PRO  1457   -17.442 -13.105  65.607  1.00 31.60
ATOM   9894  C    PRO  1457   -17.634 -14.338  68.499  1.00 31.24
ATOM   9895  O    PRO  1457   -18.850 -14.454  68.333  1.00 31.53
ATOM   9896  N    GLY  1458   -17.085 -14.081  69.683  1.00 32.29
ATOM   9897  CA   GLY  1458   -17.911 -13.903  70.864  1.00 33.07
ATOM   9898  C    GLY  1458   -18.126 -12.429  71.129  1.00 34.59
ATOM   9899  O    GLY  1458   -17.564 -11.583  70.431  1.00 34.41
ATOM   9900  N    GLU  1459   -18.931 -12.106  72.135  1.00 34.02
ATOM   9901  CA   GLU  1459   -19.191 -10.711  72.447  1.00 35.57
ATOM   9902  CB   GLU  1459   -20.174 -10.591  73.616  1.00 39.24
ATOM   9903  CG   GLU  1459   -21.239  -9.530  73.394  1.00 41.27
ATOM   9904  CD   GLU  1459   -22.226  -9.926  72.309  1.00 42.55
ATOM   9905  OE1  GLU  1459   -22.962  -9.046  71.815  1.00 43.59
ATOM   9906  OE2  GLU  1459   -22.272 -11.123  71.954  1.00 44.59
ATOM   9907  C    GLU  1459   -17.886 -10.004  72.798  1.00 34.39
ATOM   9908  O    GLU  1459   -17.763  -8.790  72.634  1.00 34.39
ATOM   9909  N    GLU  1460   -16.910 -10.775  73.271  1.00 33.94
ATOM   9910  CA   GLU  1460   -15.607 -10.232  73.645  1.00 34.54
ATOM   9911  CB   GLU  1460   -14.784 -11.277  74.404  1.00 37.12
ATOM   9912  CG   GLU  1460   -15.592 -12.160  75.331  1.00 41.64
ATOM   9913  CD   GLU  1460   -16.379 -13.213  74.579  1.00 43.05
ATOM   9914  OE1  GLU  1460   -15.745 -14.100  73.961  1.00 43.71
ATOM   9915  OE2  GLU  1460   -17.628 -13.148  74.600  1.00 44.97
ATOM   9916  C    GLU  1460   -14.828  -9.816  72.404  1.00 33.32
ATOM   9917  O    GLU  1460   -13.883  -9.031  72.488  1.00 33.42
ATOM   9918  N    HIS  1461   -15.227 -10.358  71.258  1.00 31.67
ATOM   9919  CA   HIS  1461   -14.571 -10.067  69.986  1.00 30.54
ATOM   9920  CB   HIS  1461   -14.304 -11.368  69.224  1.00 30.83
ATOM   9921  CG   HIS  1461   -13.527 -12.382  70.002  1.00 30.96
ATOM   9922  CD2  HIS  1461   -13.853 -13.630  70.415  1.00 30.87
ATOM   9923  ND1  HIS  1461   -12.236 -12.160  70.433  1.00 31.51
ATOM   9924  CE1  HIS  1461   -11.800 -13.228  71.077  1.00 32.78
ATOM   9925  NE2  HIS  1461   -12.761 -14.134  71.080  1.00 30.95
ATOM   9926  C    HIS  1461   -15.443  -9.169  69.121  1.00 30.10
ATOM   9927  O    HIS  1461   -15.096  -8.871  67.979  1.00 28.36
ATOM   9928  N    SER  1462   -16.573  -8.742  69.677  1.00 29.88
ATOM   9929  CA   SER  1462   -17.526  -7.901  68.962  1.00 31.52
ATOM   9930  CB   SER  1462   -18.930  -8.484  69.111  1.00 29.18
ATOM   9931  OG   SER  1462   -18.956  -9.846  68.726  1.00 31.95
ATOM   9932  C    SER  1462   -17.538  -6.453  69.440  1.00 33.19
ATOM   9933  O    SER  1462   -17.161  -6.161  70.576  1.00 33.68
ATOM   9934  N    PHE  1463   -17.981  -5.550  68.567  1.00 33.32
ATOM   9935  CA   PHE  1463   -18.057  -4.130  68.900  1.00 34.66
ATOM   9936  CB   PHE  1463   -17.364  -3.274  67.834  1.00 35.23
ATOM   9937  CG   PHE  1463   -15.895  -3.555  67.684  1.00 36.25
ATOM   9938  CD1  PHE  1463   -15.453  -4.650  66.951  1.00 36.98
ATOM   9939  CD2  PHE  1463   -14.952  -2.721  68.278  1.00 37.01
ATOM   9940  CE1  PHE  1463   -14.092  -4.910  66.807  1.00 37.76
ATOM   9941  CE2  PHE  1463   -13.587  -2.971  68.142  1.00 35.48
ATOM   9942  CZ   PHE  1463   -13.157  -4.068  67.405  1.00 37.03
ATOM   9943  C    PHE  1463   -19.513  -3.685  69.027  1.00 35.85
ATOM   9944  O    PHE  1463   -20.420  -4.319  68.486  1.00 33.90
ATOM   9945  N    HIS  1464   -19.727  -2.585  69.740  1.00 37.39
ATOM   9946  CA   HIS  1464   -21.068  -2.053  69.949  1.00 39.80
ATOM   9947  CB   HIS  1464   -21.623  -2.538  71.289  1.00 39.63
ATOM   9948  CG   HIS  1464   -21.853  -4.016  71.342  1.00 40.65
ATOM   9949  CD2  HIS  1464   -21.226  -4.995  72.038  1.00 40.98
ATOM   9950  ND1  HIS  1464   -22.818  -4.644  70.585  1.00 39.94
ATOM   9951  CE1  HIS  1464   -22.776  -5.945  70.810  1.00 40.36
ATOM   9952  NE2  HIS  1464   -21.818  -6.185  71.688  1.00 40.96
ATOM   9953  C    HIS  1464   -21.042  -0.535  69.920  1.00 40.95
ATOM   9954  O    HIS  1464   -21.911   0.059  69.243  1.00 41.98
ATOM   9955  OXT  HIS  1464   -20.156   0.038  70.583  1.00 42.55
ATOM   9956  C1   KPL  1465    -8.662  -8.598  56.997  1.00 40.66
ATOM   9957  C2   KPL  1465    -9.406  -8.731  55.651  1.00 40.02
ATOM   9958  C3   KPL  1465    -9.470 -10.212  55.264  1.00 40.28
ATOM   9959  C4   KPL  1465   -10.847  -8.205  55.810  1.00 41.40
ATOM   9960  O1   KPL  1465   -10.844  -6.822  56.181  1.00 43.78
ATOM   9961  C5   KPL  1465    -8.646  -7.947  54.549  1.00 38.37
```

```
ATOM    9962  O2   KPL  1465     -9.203  -7.052  53.945  1.00 39.08
ATOM    9963  C6   KPL  1465     -7.208  -8.268  54.193  1.00 36.59
ATOM    9964  O3   KPL  1465     -6.611  -9.157  54.768  1.00 34.92
ATOM    9965  O4   KPL  1465     -6.578  -7.561  53.231  1.00 31.35
ATOM    9966  CB   MET  1501     12.451 -25.585  -6.577  1.00 68.45
ATOM    9967  CG   MET  1501     12.983 -25.086  -7.922  1.00 70.78
ATOM    9968  SD   MET  1501     14.555 -25.814  -8.446  1.00 73.21
ATOM    9969  CE   MET  1501     15.640 -24.379  -8.381  1.00 72.59
ATOM    9970  C    MET  1501     14.232 -26.660  -5.175  1.00 64.43
ATOM    9971  O    MET  1501     13.933 -27.714  -5.740  1.00 64.33
ATOM    9972  N    MET  1501     14.252 -24.188  -5.606  1.00 67.20
ATOM    9973  CA   MET  1501     13.404 -25.395  -5.390  1.00 66.44
ATOM    9974  N    LYS  1502     15.270 -26.551  -4.351  1.00 61.82
ATOM    9975  CA   LYS  1502     16.137 -27.690  -4.067  1.00 58.51
ATOM    9976  CB   LYS  1502     17.506 -27.493  -4.719  1.00 59.36
ATOM    9977  CG   LYS  1502     17.454 -27.205  -6.219  1.00 59.84
ATOM    9978  CD   LYS  1502     16.747 -28.314  -6.992  1.00 60.21
ATOM    9979  CE   LYS  1502     17.479 -29.641  -6.871  1.00 60.21
ATOM    9980  NZ   LYS  1502     16.766 -30.731  -7.593  1.00 60.90
ATOM    9981  C    LYS  1502     16.286 -27.938  -2.562  1.00 55.49
ATOM    9982  O    LYS  1502     16.023 -29.039  -2.083  1.00 56.98
ATOM    9983  N    PRO  1503     16.733 -26.918  -1.795  1.00 51.21
ATOM    9984  CD   PRO  1503     16.674 -27.002  -0.323  1.00 49.69
ATOM    9985  CA   PRO  1503     17.082 -25.554  -2.213  1.00 46.71
ATOM    9986  CB   PRO  1503     16.764 -24.739  -0.973  1.00 48.28
ATOM    9987  CG   PRO  1503     17.226 -25.653   0.112  1.00 49.41
ATOM    9988  C    PRO  1503     18.558 -25.434  -2.610  1.00 42.37
ATOM    9989  O    PRO  1503     19.337 -26.369  -2.433  1.00 41.84
ATOM    9990  N    THR  1504     18.929 -24.274  -3.142  1.00 37.50
ATOM    9991  CA   THR  1504     20.302 -24.024  -3.565  1.00 33.10
ATOM    9992  CB   THR  1504     20.375 -22.784  -4.485  1.00 32.53
ATOM    9993  OG1  THR  1504     19.578 -23.011  -5.653  1.00 33.15
ATOM    9994  CG2  THR  1504     21.808 -22.502  -4.905  1.00 29.59
ATOM    9995  C    THR  1504     21.190 -23.805  -2.342  1.00 31.99
ATOM    9996  O    THR  1504     20.826 -23.069  -1.425  1.00 29.30
ATOM    9997  N    THR  1505     22.354 -24.446  -2.332  1.00 30.78
ATOM    9998  CA   THR  1505     23.273 -24.324  -1.208  1.00 29.63
ATOM    9999  CB   THR  1505     23.305 -25.619  -0.369  1.00 29.85
ATOM   10000  OG1  THR  1505     23.894 -26.674  -1.138  1.00 31.33
ATOM   10001  CG2  THR  1505     21.899 -26.029   0.036  1.00 29.10
ATOM   10002  C    THR  1505     24.695 -24.014  -1.659  1.00 29.48
ATOM   10003  O    THR  1505     25.006 -24.056  -2.850  1.00 27.82
ATOM   10004  N    ILE  1506     25.557 -23.708  -0.693  1.00 29.78
ATOM   10005  CA   ILE  1506     26.950 -23.391  -0.975  1.00 30.15
ATOM   10006  CB   ILE  1506     27.723 -23.108   0.331  1.00 31.02
ATOM   10007  CG2  ILE  1506     29.122 -22.597   0.013  1.00 30.67
ATOM   10008  CG1  ILE  1506     26.966 -22.065   1.161  1.00 31.55
ATOM   10009  CD1  ILE  1506     27.492 -21.896   2.576  1.00 33.42
ATOM   10010  C    ILE  1506     27.593 -24.568  -1.705  1.00 30.17
ATOM   10011  O    ILE  1506     28.525 -24.394  -2.491  1.00 30.44
ATOM   10012  N    SER  1507     27.077 -25.765  -1.441  1.00 31.25
ATOM   10013  CA   SER  1507     27.576 -26.990  -2.059  1.00 33.43
ATOM   10014  CB   SER  1507     26.707 -28.180  -1.646  1.00 34.53
ATOM   10015  OG   SER  1507     26.578 -28.258  -0.238  1.00 39.65
ATOM   10016  C    SER  1507     27.579 -26.889  -3.580  1.00 33.68
ATOM   10017  O    SER  1507     28.551 -27.269  -4.234  1.00 33.38
ATOM   10018  N    LEU  1508     26.483 -26.383  -4.137  1.00 32.89
ATOM   10019  CA   LEU  1508     26.361 -26.242  -5.582  1.00 32.80
ATOM   10020  CB   LEU  1508     24.970 -25.720  -5.958  1.00 34.32
ATOM   10021  CG   LEU  1508     24.031 -26.678  -6.701  1.00 36.26
ATOM   10022  CD1  LEU  1508     22.694 -25.992  -6.951  1.00 36.00
ATOM   10023  CD2  LEU  1508     24.661 -27.114  -8.009  1.00 36.33
ATOM   10024  C    LEU  1508     27.420 -25.307  -6.156  1.00 31.90
ATOM   10025  O    LEU  1508     28.012 -25.597  -7.196  1.00 32.06
ATOM   10026  N    LEU  1509     27.659 -24.187  -5.482  1.00 29.72
ATOM   10027  CA   LEU  1509     28.646 -23.226  -5.959  1.00 29.54
ATOM   10028  CB   LEU  1509     28.595 -21.946  -5.116  1.00 29.54
ATOM   10029  CG   LEU  1509     27.233 -21.237  -5.105  1.00 29.15
ATOM   10030  CD1  LEU  1509     27.350 -19.898  -4.383  1.00 30.33
ATOM   10031  CD2  LEU  1509     26.748 -21.021  -6.535  1.00 28.87
ATOM   10032  C    LEU  1509     30.044 -23.830  -5.927  1.00 30.18
ATOM   10033  O    LEU  1509     30.875 -23.559  -6.799  1.00 27.72
ATOM   10034  N    GLN  1510     30.294 -24.658  -4.920  1.00 30.60
ATOM   10035  CA   GLN  1510     31.587 -25.308  -4.779  1.00 32.89
ATOM   10036  CB   GLN  1510     31.674 -26.008  -3.419  1.00 32.23
ATOM   10037  CG   GLN  1510     33.059 -26.521  -3.051  1.00 34.03
ATOM   10038  CD   GLN  1510     34.137 -25.452  -3.146  1.00 35.52
```

```
ATOM  10039  OE1 GLN  1510      34.673 -25.187   -4.223  1.00 36.22
ATOM  10040  NE2 GLN  1510      34.452 -24.824   -2.017  1.00 34.94
ATOM  10041  C   GLN  1510      31.747 -26.312   -5.920  1.00 33.79
ATOM  10042  O   GLN  1510      32.852 -26.537   -6.408  1.00 34.78
ATOM  10043  N   LYS  1511      30.636 -26.906   -6.345  1.00 35.14
ATOM  10044  CA  LYS  1511      30.659 -27.864   -7.446  1.00 36.98
ATOM  10045  CB  LYS  1511      29.309 -28.574   -7.574  1.00 38.13
ATOM  10046  CG  LYS  1511      29.169 -29.386   -8.859  1.00 40.56
ATOM  10047  CD  LYS  1511      27.711 -29.594   -9.259  1.00 43.87
ATOM  10048  CE  LYS  1511      26.973 -30.517   -8.299  1.00 45.00
ATOM  10049  NZ  LYS  1511      25.536 -30.670   -8.686  1.00 47.90
ATOM  10050  C   LYS  1511      30.955 -27.127   -8.750  1.00 36.69
ATOM  10051  O   LYS  1511      31.694 -27.619   -9.599  1.00 37.22
ATOM  10052  N   TYR  1512      30.371 -25.942   -8.899  1.00 36.54
ATOM  10053  CA  TYR  1512      30.560 -25.141  -10.098  1.00 35.65
ATOM  10054  CB  TYR  1512      29.669 -23.900  -10.053  1.00 37.28
ATOM  10055  CG  TYR  1512      28.193 -24.188  -10.212  1.00 39.20
ATOM  10056  CD1 TYR  1512      27.249 -23.175  -10.051  1.00 41.06
ATOM  10057  CE1 TYR  1512      25.889 -23.429  -10.195  1.00 42.03
ATOM  10058  CD2 TYR  1512      27.739 -25.468  -10.526  1.00 40.61
ATOM  10059  CE2 TYR  1512      26.382 -25.734  -10.673  1.00 41.29
ATOM  10060  CZ  TYR  1512      25.463 -24.710  -10.506  1.00 42.07
ATOM  10061  OH  TYR  1512      24.117 -24.963  -10.646  1.00 43.50
ATOM  10062  C   TYR  1512      32.002 -24.716  -10.328  1.00 36.33
ATOM  10063  O   TYR  1512      32.492 -24.771  -11.457  1.00 34.44
ATOM  10064  N   LYS  1513      32.684 -24.277   -9.274  1.00 35.91
ATOM  10065  CA  LYS  1513      34.074 -23.858   -9.426  1.00 37.24
ATOM  10066  CB  LYS  1513      34.646 -23.362   -8.090  1.00 35.07
ATOM  10067  CG  LYS  1513      36.146 -23.108   -8.136  1.00 32.35
ATOM  10068  CD  LYS  1513      36.594 -22.091   -7.096  1.00 31.84
ATOM  10069  CE  LYS  1513      38.093 -21.848   -7.198  1.00 30.35
ATOM  10070  NZ  LYS  1513      38.524 -20.591   -6.529  1.00 29.60
ATOM  10071  C   LYS  1513      34.907 -25.022   -9.954  1.00 38.69
ATOM  10072  O   LYS  1513      35.870 -24.829  -10.694  1.00 39.24
ATOM  10073  N   GLN  1514      34.517 -26.231   -9.567  1.00 40.67
ATOM  10074  CA  GLN  1514      35.205 -27.437   -9.995  1.00 43.38
ATOM  10075  CB  GLN  1514      34.733 -28.623   -9.160  1.00 45.15
ATOM  10076  CG  GLN  1514      35.177 -28.565   -7.710  1.00 48.35
ATOM  10077  CD  GLN  1514      34.481 -29.604   -6.855  1.00 49.83
ATOM  10078  OE1 GLN  1514      34.101 -30.669   -7.343  1.00 51.33
ATOM  10079  NE2 GLN  1514      34.321 -29.304   -5.570  1.00 50.47
ATOM  10080  C   GLN  1514      34.936 -27.704  -11.470  1.00 43.74
ATOM  10081  O   GLN  1514      35.820 -28.148  -12.200  1.00 44.54
ATOM  10082  N   GLU  1515      33.710 -27.428  -11.902  1.00 43.52
ATOM  10083  CA  GLU  1515      33.329 -27.637  -13.291  1.00 43.19
ATOM  10084  CB  GLU  1515      31.830 -27.920  -13.394  1.00 44.57
ATOM  10085  CG  GLU  1515      31.351 -29.051  -12.502  1.00 46.62
ATOM  10086  CD  GLU  1515      29.909 -29.430  -12.773  1.00 48.59
ATOM  10087  OE1 GLU  1515      29.051 -28.525  -12.825  1.00 48.92
ATOM  10088  OE2 GLU  1515      29.630 -30.637  -12.927  1.00 51.45
ATOM  10089  C   GLU  1515      33.676 -26.417  -14.136  1.00 42.44
ATOM  10090  O   GLU  1515      33.426 -26.396  -15.343  1.00 43.10
ATOM  10091  N   LYS  1516      34.255 -25.405  -13.496  1.00 40.37
ATOM  10092  CA  LYS  1516      34.633 -24.169  -14.175  1.00 39.50
ATOM  10093  CB  LYS  1516      35.645 -24.459  -15.282  1.00 40.90
ATOM  10094  CG  LYS  1516      36.965 -25.031  -14.793  1.00 42.75
ATOM  10095  CD  LYS  1516      37.714 -24.039  -13.919  1.00 45.19
ATOM  10096  CE  LYS  1516      39.074 -24.585  -13.498  1.00 46.49
ATOM  10097  NZ  LYS  1516      39.950 -24.871  -14.670  1.00 48.49
ATOM  10098  C   LYS  1516      33.408 -23.475  -14.768  1.00 38.14
ATOM  10099  O   LYS  1516      33.512 -22.731  -15.745  1.00 38.51
ATOM  10100  N   LYS  1517      32.249 -23.727  -14.170  1.00 35.26
ATOM  10101  CA  LYS  1517      31.003 -23.128  -14.630  1.00 33.69
ATOM  10102  CB  LYS  1517      29.837 -24.084  -14.385  1.00 34.32
ATOM  10103  CG  LYS  1517      28.497 -23.587  -14.904  1.00 35.09
ATOM  10104  CD  LYS  1517      27.352 -24.446  -14.384  1.00 37.44
ATOM  10105  CE  LYS  1517      27.483 -25.896  -14.832  1.00 39.19
ATOM  10106  NZ  LYS  1517      26.503 -26.777  -14.131  1.00 41.39
ATOM  10107  C   LYS  1517      30.765 -21.823  -13.878  1.00 31.87
ATOM  10108  O   LYS  1517      30.366 -21.830  -12.715  1.00 31.03
ATOM  10109  N   ARG  1518      31.018 -20.704  -14.546  1.00 30.53
ATOM  10110  CA  ARG  1518      30.826 -19.399  -13.929  1.00 28.43
ATOM  10111  CB  ARG  1518      31.462 -18.319  -14.805  1.00 30.06
ATOM  10112  CG  ARG  1518      32.981 -18.306  -14.714  1.00 31.46
ATOM  10113  CD  ARG  1518      33.626 -17.421  -15.766  1.00 33.23
ATOM  10114  NE  ARG  1518      33.666 -18.071  -17.074  1.00 35.53
ATOM  10115  CZ  ARG  1518      34.192 -17.523  -18.165  1.00 36.48
```

```
ATOM  10116  NH1  ARG  1518     34.723 -16.308 -18.113  1.00 34.15
ATOM  10117  NH2  ARG  1518     34.192 -18.194 -19.308  1.00 37.73
ATOM  10118  C    ARG  1518     29.340 -19.127 -13.692  1.00 27.86
ATOM  10119  O    ARG  1518     28.518 -19.234 -14.605  1.00 27.30
ATOM  10120  N    PHE  1519     29.008 -18.776 -12.452  1.00 25.52
ATOM  10121  CA   PHE  1519     27.625 -18.518 -12.056  1.00 23.05
ATOM  10122  CB   PHE  1519     27.283 -19.382 -10.841  1.00 23.24
ATOM  10123  CG   PHE  1519     28.151 -19.109  -9.646  1.00 22.05
ATOM  10124  CD1  PHE  1519     27.829 -18.085  -8.755  1.00 22.20
ATOM  10125  CD2  PHE  1519     29.311 -19.851  -9.428  1.00 24.57
ATOM  10126  CE1  PHE  1519     28.650 -17.800  -7.666  1.00 20.88
ATOM  10127  CE2  PHE  1519     30.142 -19.575  -8.342  1.00 24.45
ATOM  10128  CZ   PHE  1519     29.810 -18.547  -7.457  1.00 23.26
ATOM  10129  C    PHE  1519     27.356 -17.048 -11.738  1.00 23.05
ATOM  10130  O    PHE  1519     28.248 -16.314 -11.310  1.00 21.97
ATOM  10131  N    ALA  1520     26.113 -16.627 -11.944  1.00 21.46
ATOM  10132  CA   ALA  1520     25.718 -15.250 -11.687  1.00 20.80
ATOM  10133  CB   ALA  1520     24.835 -14.747 -12.822  1.00 20.77
ATOM  10134  C    ALA  1520     24.991 -15.098 -10.352  1.00 19.62
ATOM  10135  O    ALA  1520     24.241 -15.980  -9.936  1.00 20.43
ATOM  10136  N    THR  1521     25.230 -13.972  -9.688  1.00 19.21
ATOM  10137  CA   THR  1521     24.602 -13.663  -8.406  1.00 20.28
ATOM  10138  CB   THR  1521     25.626 -13.736  -7.259  1.00 20.78
ATOM  10139  OG1  THR  1521     26.154 -15.070  -7.183  1.00 23.74
ATOM  10140  CG2  THR  1521     24.967 -13.386  -5.934  1.00 27.16
ATOM  10141  C    THR  1521     24.030 -12.250  -8.495  1.00 17.98
ATOM  10142  O    THR  1521     24.485 -11.435  -9.300  1.00 17.51
ATOM  10143  N    ILE  1522     23.042 -11.942  -7.666  1.00 17.55
ATOM  10144  CA   ILE  1522     22.427 -10.626  -7.746  1.00 15.48
ATOM  10145  CB   ILE  1522     21.232 -10.684  -8.726  1.00 15.93
ATOM  10146  CG2  ILE  1522     20.049 -11.381  -8.064  1.00 15.09
ATOM  10147  CG1  ILE  1522     20.846  -9.276  -9.185  1.00 15.40
ATOM  10148  CD1  ILE  1522     21.865  -8.630 -10.104  1.00 21.34
ATOM  10149  C    ILE  1522     21.944 -10.131  -6.386  1.00 15.61
ATOM  10150  O    ILE  1522     21.694 -10.926  -5.485  1.00 13.97
ATOM  10151  N    THR  1523     21.825  -8.818  -6.226  1.00 17.24
ATOM  10152  CA   THR  1523     21.331  -8.289  -4.962  1.00 16.39
ATOM  10153  CB   THR  1523     21.855  -6.859  -4.657  1.00 16.96
ATOM  10154  OG1  THR  1523     21.353  -5.938  -5.628  1.00 18.49
ATOM  10155  CG2  THR  1523     23.385  -6.828  -4.660  1.00 17.93
ATOM  10156  C    THR  1523     19.806  -8.255  -5.065  1.00 15.12
ATOM  10157  O    THR  1523     19.250  -8.196  -6.156  1.00 15.19
ATOM  10158  N    ALA  1524     19.131  -8.323  -3.925  1.00 15.23
ATOM  10159  CA   ALA  1524     17.675  -8.280  -3.889  1.00 12.50
ATOM  10160  CB   ALA  1524     17.092  -9.670  -4.121  1.00 13.98
ATOM  10161  C    ALA  1524     17.296  -7.759  -2.508  1.00 13.20
ATOM  10162  O    ALA  1524     17.943  -8.102  -1.517  1.00 14.00
ATOM  10163  N    TYR  1525     16.244  -6.946  -2.448  1.00 13.12
ATOM  10164  CA   TYR  1525     15.813  -6.346  -1.190  1.00 13.36
ATOM  10165  CB   TYR  1525     16.287  -4.896  -1.112  1.00 12.75
ATOM  10166  CG   TYR  1525     17.633  -4.646  -1.748  1.00 14.96
ATOM  10167  CD1  TYR  1525     17.717  -4.174  -3.056  1.00 16.08
ATOM  10168  CE1  TYR  1525     18.938  -3.904  -3.648  1.00 18.05
ATOM  10169  CD2  TYR  1525     18.820  -4.852  -1.040  1.00 15.12
ATOM  10170  CE2  TYR  1525     20.064  -4.582  -1.627  1.00 14.69
ATOM  10171  CZ   TYR  1525     20.107  -4.107  -2.928  1.00 16.54
ATOM  10172  OH   TYR  1525     21.315  -3.807  -3.521  1.00 17.02
ATOM  10173  C    TYR  1525     14.305  -6.357  -0.977  1.00 13.91
ATOM  10174  O    TYR  1525     13.808  -5.714  -0.053  1.00 12.93
ATOM  10175  N    ASP  1526     13.575  -7.055  -1.839  1.00 12.13
ATOM  10176  CA   ASP  1526     12.129  -7.127  -1.692  1.00 12.96
ATOM  10177  CB   ASP  1526     11.454  -5.901  -2.325  1.00 13.73
ATOM  10178  CG   ASP  1526     11.615  -5.846  -3.835  1.00 17.18
ATOM  10179  OD1  ASP  1526     10.998  -6.672  -4.543  1.00 19.08
ATOM  10180  OD2  ASP  1526     12.363  -4.967  -4.311  1.00 19.29
ATOM  10181  C    ASP  1526     11.574  -8.412  -2.297  1.00 14.23
ATOM  10182  O    ASP  1526     12.250  -9.088  -3.071  1.00 13.08
ATOM  10183  N    TYR  1527     10.343  -8.741  -1.918  1.00 11.93
ATOM  10184  CA   TYR  1527      9.648  -9.941  -2.387  1.00 13.16
ATOM  10185  CB   TYR  1527      8.248  -9.987  -1.778  1.00 14.17
ATOM  10186  CG   TYR  1527      7.338 -11.037  -2.388  1.00 16.24
ATOM  10187  CD1  TYR  1527      7.352 -12.348  -1.925  1.00 16.32
ATOM  10188  CE1  TYR  1527      6.527 -13.320  -2.484  1.00 17.69
ATOM  10189  CD2  TYR  1527      6.468 -10.718  -3.437  1.00 17.45
ATOM  10190  CE2  TYR  1527      5.637 -11.688  -4.007  1.00 17.34
ATOM  10191  CZ   TYR  1527      5.677 -12.987  -3.519  1.00 19.46
ATOM  10192  OH   TYR  1527      4.875 -13.963  -4.069  1.00 21.07
```

```
ATOM  10193  C    TYR  1527      9.503 -10.052  -3.901  1.00 14.65
ATOM  10194  O    TYR  1527      9.766 -11.102  -4.480  1.00 13.71
ATOM  10195  N    SER  1528      9.057  -8.974  -4.534  1.00 14.41
ATOM  10196  CA   SER  1528      8.825  -9.001  -5.965  1.00 12.84
ATOM  10197  CB   SER  1528      8.203  -7.687  -6.422  1.00 13.95
ATOM  10198  OG   SER  1528      6.922  -7.521  -5.821  1.00 16.83
ATOM  10199  C    SER  1528     10.041  -9.324  -6.809  1.00 13.31
ATOM  10200  O    SER  1528      9.991 -10.229  -7.650  1.00 13.87
ATOM  10201  N    PHE  1529     11.139  -8.609  -6.610  1.00 13.52
ATOM  10202  CA   PHE  1529     12.315  -8.926  -7.410  1.00 14.35
ATOM  10203  CB   PHE  1529     13.359  -7.817  -7.299  1.00 12.92
ATOM  10204  CG   PHE  1529     13.092  -6.664  -8.215  1.00 16.39
ATOM  10205  CD1  PHE  1529     12.474  -5.511  -7.747  1.00 15.02
ATOM  10206  CD2  PHE  1529     13.443  -6.743  -9.560  1.00 15.32
ATOM  10207  CE1  PHE  1529     12.207  -4.440  -8.609  1.00 17.64
ATOM  10208  CE2  PHE  1529     13.183  -5.685 -10.432  1.00 16.87
ATOM  10209  CZ   PHE  1529     12.564  -4.529  -9.959  1.00 17.73
ATOM  10210  C    PHE  1529     12.909 -10.279  -7.038  1.00 13.50
ATOM  10211  O    PHE  1529     13.384 -11.010  -7.908  1.00 14.17
ATOM  10212  N    ALA  1530     12.865 -10.628  -5.757  1.00 13.05
ATOM  10213  CA   ALA  1530     13.395 -11.925  -5.337  1.00 13.28
ATOM  10214  CB   ALA  1530     13.261 -12.083  -3.819  1.00 11.40
ATOM  10215  C    ALA  1530     12.640 -13.050  -6.050  1.00 13.09
ATOM  10216  O    ALA  1530     13.242 -14.003  -6.546  1.00 14.85
ATOM  10217  N    LYS  1531     11.315 -12.931  -6.087  1.00 13.26
ATOM  10218  CA   LYS  1531     10.458 -13.928  -6.728  1.00 14.54
ATOM  10219  CB   LYS  1531      8.991 -13.535  -6.523  1.00 15.21
ATOM  10220  CG   LYS  1531      7.959 -14.425  -7.195  1.00 19.57
ATOM  10221  CD   LYS  1531      7.576 -15.623  -6.363  1.00 24.21
ATOM  10222  CE   LYS  1531      6.196 -16.116  -6.781  1.00 25.02
ATOM  10223  NZ   LYS  1531      6.169 -16.393  -8.238  1.00 27.58
ATOM  10224  C    LYS  1531     10.773 -14.020  -8.221  1.00 13.65
ATOM  10225  O    LYS  1531     10.854 -15.114  -8.783  1.00 13.38
ATOM  10226  N    LEU  1532     10.941 -12.863  -8.853  1.00 15.51
ATOM  10227  CA   LEU  1532     11.238 -12.793 -10.283  1.00 15.37
ATOM  10228  CB   LEU  1532     11.295 -11.326 -10.727  1.00 16.67
ATOM  10229  CG   LEU  1532     11.485 -11.051 -12.233  1.00 13.94
ATOM  10230  CD1  LEU  1532     11.109  -9.614 -12.552  1.00 15.17
ATOM  10231  CD2  LEU  1532     12.937 -11.316 -12.617  1.00 18.81
ATOM  10232  C    LEU  1532     12.555 -13.507 -10.605  1.00 15.94
ATOM  10233  O    LEU  1532     12.612 -14.332 -11.522  1.00 18.14
ATOM  10234  N    PHE  1533     13.604 -13.201  -9.844  1.00 16.77
ATOM  10235  CA   PHE  1533     14.905 -13.825 -10.063  1.00 16.92
ATOM  10236  CB   PHE  1533     15.965 -13.248  -9.106  1.00 16.06
ATOM  10237  CG   PHE  1533     16.169 -11.762  -9.227  1.00 16.65
ATOM  10238  CD1  PHE  1533     15.971 -11.111 -10.440  1.00 18.16
ATOM  10239  CD2  PHE  1533     16.564 -11.011  -8.119  1.00 14.45
ATOM  10240  CE1  PHE  1533     16.157  -9.735 -10.554  1.00 18.81
ATOM  10241  CE2  PHE  1533     16.754  -9.632  -8.225  1.00 16.25
ATOM  10242  CZ   PHE  1533     16.549  -8.991  -9.443  1.00 18.42
ATOM  10243  C    PHE  1533     14.814 -15.337  -9.858  1.00 17.37
ATOM  10244  O    PHE  1533     15.257 -16.112 -10.699  1.00 17.81
ATOM  10245  N    ALA  1534     14.237 -15.743  -8.732  1.00 17.43
ATOM  10246  CA   ALA  1534     14.085 -17.159  -8.417  1.00 19.85
ATOM  10247  CB   ALA  1534     13.370 -17.333  -7.074  1.00 20.47
ATOM  10248  C    ALA  1534     13.316 -17.900  -9.509  1.00 21.04
ATOM  10249  O    ALA  1534     13.616 -19.057  -9.822  1.00 19.42
ATOM  10250  N    ASP  1535     12.318 -17.243 -10.085  1.00 22.15
ATOM  10251  CA   ASP  1535     11.530 -17.879 -11.131  1.00 22.54
ATOM  10252  CB   ASP  1535     10.232 -17.109 -11.387  1.00 24.94
ATOM  10253  CG   ASP  1535      9.228 -17.260 -10.259  1.00 26.10
ATOM  10254  OD1  ASP  1535      9.260 -18.288  -9.553  1.00 29.47
ATOM  10255  OD2  ASP  1535      8.398 -16.352 -10.093  1.00 30.35
ATOM  10256  C    ASP  1535     12.287 -18.042 -12.447  1.00 22.47
ATOM  10257  O    ASP  1535     11.874 -18.823 -13.296  1.00 22.23
ATOM  10258  N    GLU  1536     13.386 -17.311 -12.617  1.00 22.56
ATOM  10259  CA   GLU  1536     14.187 -17.407 -13.838  1.00 23.73
ATOM  10260  CB   GLU  1536     14.678 -16.024 -14.278  1.00 23.59
ATOM  10261  CG   GLU  1536     13.583 -15.086 -14.756  1.00 25.82
ATOM  10262  CD   GLU  1536     12.700 -15.718 -15.814  1.00 26.18
ATOM  10263  OE1  GLU  1536     13.256 -16.349 -16.739  1.00 25.95
ATOM  10264  OE2  GLU  1536     11.459 -15.575 -15.718  1.00 26.71
ATOM  10265  C    GLU  1536     15.397 -18.325 -13.672  1.00 24.75
ATOM  10266  O    GLU  1536     15.973 -18.784 -14.654  1.00 26.28
ATOM  10267  N    GLY  1537     15.797 -18.583 -12.433  1.00 25.87
ATOM  10268  CA   GLY  1537     16.944 -19.447 -12.223  1.00 25.64
ATOM  10269  C    GLY  1537     18.037 -18.855 -11.356  1.00 24.92
```

```
ATOM   10270  O   GLY  1537      18.903 -19.588 -10.893  1.00 26.48
ATOM   10271  N   LEU  1538      18.014 -17.540 -11.148  1.00 23.82
ATOM   10272  CA  LEU  1538      19.010 -16.872 -10.305  1.00 24.22
ATOM   10273  CB  LEU  1538      18.938 -15.356 -10.488  1.00 24.47
ATOM   10274  CG  LEU  1538      20.087 -14.653 -11.205  1.00 26.59
ATOM   10275  CD1 LEU  1538      19.769 -13.170 -11.298  1.00 23.00
ATOM   10276  CD2 LEU  1538      21.403 -14.879 -10.479  1.00 25.88
ATOM   10277  C   LEU  1538      18.682 -17.223  -8.862  1.00 23.54
ATOM   10278  O   LEU  1538      17.831 -16.580  -8.246  1.00 22.67
ATOM   10279  N   ASN  1539      19.372 -18.235  -8.338  1.00 23.14
ATOM   10280  CA  ASN  1539      19.146 -18.740  -6.985  1.00 23.02
ATOM   10281  CB  ASN  1539      19.144 -20.276  -6.991  1.00 25.31
ATOM   10282  CG  ASN  1539      18.057 -20.857  -7.877  1.00 29.87
ATOM   10283  OD1 ASN  1539      16.946 -20.333  -7.935  1.00 31.66
ATOM   10284  ND2 ASN  1539      18.367 -21.956  -8.560  1.00 32.41
ATOM   10285  C   ASN  1539      20.120 -18.266  -5.905  1.00 21.17
ATOM   10286  O   ASN  1539      20.100 -18.785  -4.787  1.00 22.27
ATOM   10287  N   VAL  1540      20.973 -17.303  -6.229  1.00 18.20
ATOM   10288  CA  VAL  1540      21.922 -16.778  -5.255  1.00 17.11
ATOM   10289  CB  VAL  1540      23.383 -17.043  -5.672  1.00 16.57
ATOM   10290  CG1 VAL  1540      24.322 -16.576  -4.558  1.00 19.33
ATOM   10291  CG2 VAL  1540      23.583 -18.517  -5.941  1.00 17.44
ATOM   10292  C   VAL  1540      21.699 -15.284  -5.161  1.00 15.86
ATOM   10293  O   VAL  1540      21.949 -14.537  -6.113  1.00 14.51
ATOM   10294  N   MET  1541      21.218 -14.845  -4.008  1.00 14.44
ATOM   10295  CA  MET  1541      20.921 -13.437  -3.815  1.00 14.69
ATOM   10296  CB  MET  1541      19.408 -13.226  -3.696  1.00 16.00
ATOM   10297  CG  MET  1541      18.661 -13.438  -4.990  1.00 17.44
ATOM   10298  SD  MET  1541      16.908 -13.405  -4.789  1.00 18.84
ATOM   10299  CE  MET  1541      16.460 -15.008  -5.443  1.00 17.64
ATOM   10300  C   MET  1541      21.579 -12.869  -2.586  1.00 14.81
ATOM   10301  O   MET  1541      21.776 -13.564  -1.587  1.00 15.31
ATOM   10302  N   LEU  1542      21.885 -11.585  -2.656  1.00 14.00
ATOM   10303  CA  LEU  1542      22.518 -10.920  -1.537  1.00 13.41
ATOM   10304  CB  LEU  1542      23.945 -10.527  -1.929  1.00 16.33
ATOM   10305  CG  LEU  1542      24.874  -9.753  -0.982  1.00 22.57
ATOM   10306  CD1 LEU  1542      24.655  -8.278  -1.204  1.00 25.11
ATOM   10307  CD2 LEU  1542      24.678 -10.149   0.485  1.00 19.55
ATOM   10308  C   LEU  1542      21.726  -9.706  -1.077  1.00 11.50
ATOM   10309  O   LEU  1542      21.406  -8.814  -1.862  1.00 11.99
ATOM   10310  N   VAL  1543      21.394  -9.701   0.210  1.00 12.88
ATOM   10311  CA  VAL  1543      20.685  -8.590   0.805  1.00 12.95
ATOM   10312  CB  VAL  1543      19.750  -9.067   1.918  1.00 14.28
ATOM   10313  CG1 VAL  1543      19.016  -7.885   2.529  1.00 15.11
ATOM   10314  CG2 VAL  1543      18.759 -10.079   1.344  1.00 13.81
ATOM   10315  C   VAL  1543      21.838  -7.785   1.377  1.00 14.63
ATOM   10316  O   VAL  1543      22.264  -7.998   2.516  1.00 14.81
ATOM   10317  N   GLY  1544      22.362  -6.883   0.557  1.00 14.42
ATOM   10318  CA  GLY  1544      23.503  -6.088   0.966  1.00 16.82
ATOM   10319  C   GLY  1544      23.197  -4.703   1.471  1.00 16.06
ATOM   10320  O   GLY  1544      22.122  -4.155   1.207  1.00 17.57
ATOM   10321  N   ASP  1545      24.153  -4.126   2.196  1.00 16.67
ATOM   10322  CA  ASP  1545      23.945  -2.796   2.730  1.00 16.34
ATOM   10323  CB  ASP  1545      24.990  -2.444   3.808  1.00 18.01
ATOM   10324  CG  ASP  1545      26.422  -2.547   3.324  1.00 17.58
ATOM   10325  OD1 ASP  1545      26.656  -2.778   2.126  1.00 18.33
ATOM   10326  OD2 ASP  1545      27.321  -2.384   4.171  1.00 20.23
ATOM   10327  C   ASP  1545      23.910  -1.765   1.613  1.00 15.12
ATOM   10328  O   ASP  1545      23.718  -0.578   1.860  1.00 17.15
ATOM   10329  N   SER  1546      24.066  -2.223   0.373  1.00 15.22
ATOM   10330  CA  SER  1546      23.966  -1.307  -0.752  1.00 13.69
ATOM   10331  CB  SER  1546      24.223  -2.036  -2.077  1.00 16.92
ATOM   10332  OG  SER  1546      23.495  -3.253  -2.157  1.00 16.30
ATOM   10333  C   SER  1546      22.554  -0.721  -0.725  1.00 15.02
ATOM   10334  O   SER  1546      22.302   0.346  -1.289  1.00 16.38
ATOM   10335  N   LEU  1547      21.627  -1.411  -0.057  1.00 13.61
ATOM   10336  CA  LEU  1547      20.255  -0.904   0.033  1.00 13.00
ATOM   10337  CB  LEU  1547      19.359  -1.891   0.804  1.00 14.09
ATOM   10338  CG  LEU  1547      19.730  -2.207   2.259  1.00 11.97
ATOM   10339  CD1 LEU  1547      19.088  -1.193   3.174  1.00 17.68
ATOM   10340  CD2 LEU  1547      19.261  -3.621   2.631  1.00 16.59
ATOM   10341  C   LEU  1547      20.246   0.471   0.711  1.00 13.72
ATOM   10342  O   LEU  1547      19.303   1.249   0.556  1.00 12.82
ATOM   10343  N   GLY  1548      21.302   0.768   1.462  1.00 14.37
ATOM   10344  CA  GLY  1548      21.386   2.059   2.128  1.00 13.78
ATOM   10345  C   GLY  1548      21.310   3.187   1.120  1.00 15.41
ATOM   10346  O   GLY  1548      20.786   4.267   1.403  1.00 15.37
```

```
ATOM   10347  N    MET  1549      21.805    2.914   -0.083  1.00 16.39
ATOM   10348  CA   MET  1549      21.825    3.900   -1.151  1.00 16.76
ATOM   10349  CB   MET  1549      23.198    3.852   -1.842  1.00 18.82
ATOM   10350  CG   MET  1549      24.346    4.147   -0.882  1.00 20.11
ATOM   10351  SD   MET  1549      26.012    3.963   -1.563  1.00 26.68
ATOM   10352  CE   MET  1549      26.138    5.439   -2.542  1.00 27.73
ATOM   10353  C    MET  1549      20.696    3.703   -2.165  1.00 17.66
ATOM   10354  O    MET  1549      19.935    4.627   -2.443  1.00 19.20
ATOM   10355  N    THR  1550      20.567    2.495   -2.700  1.00 17.07
ATOM   10356  CA   THR  1550      19.529    2.234   -3.693  1.00 17.56
ATOM   10357  CB   THR  1550      19.809    0.931   -4.439  1.00 21.36
ATOM   10358  OG1  THR  1550      18.737    0.665   -5.349  1.00 29.04
ATOM   10359  CG2  THR  1550      19.953   -0.219   -3.472  1.00 19.69
ATOM   10360  C    THR  1550      18.103    2.191   -3.143  1.00 17.30
ATOM   10361  O    THR  1550      17.144    2.507   -3.853  1.00 19.51
ATOM   10362  N    VAL  1551      17.949    1.800   -1.884  1.00 16.88
ATOM   10363  CA   VAL  1551      16.616    1.741   -1.297  1.00 15.66
ATOM   10364  CB   VAL  1551      16.412    0.423   -0.504  1.00 16.16
ATOM   10365  CG1  VAL  1551      15.077    0.454    0.240  1.00 15.49
ATOM   10366  CG2  VAL  1551      16.436   -0.760   -1.452  1.00 17.32
ATOM   10367  C    VAL  1551      16.344    2.929   -0.377  1.00 14.94
ATOM   10368  O    VAL  1551      15.351    3.635   -0.540  1.00 13.06
ATOM   10369  N    GLN  1552      17.231    3.155    0.584  1.00 13.60
ATOM   10370  CA   GLN  1552      17.041    4.242    1.536  1.00 13.62
ATOM   10371  CB   GLN  1552      17.857    3.963    2.798  1.00 14.36
ATOM   10372  CG   GLN  1552      17.589    2.569    3.329  1.00 15.64
ATOM   10373  CD   GLN  1552      18.298    2.290    4.628  1.00 14.11
ATOM   10374  OE1  GLN  1552      19.342    2.875    4.914  1.00 17.01
ATOM   10375  NE2  GLN  1552      17.744    1.372    5.418  1.00 12.68
ATOM   10376  C    GLN  1552      17.396    5.610    0.968  1.00 12.37
ATOM   10377  O    GLN  1552      16.852    6.625    1.403  1.00 13.34
ATOM   10378  N    GLY  1553      18.312    5.643    0.007  1.00 13.54
ATOM   10379  CA   GLY  1553      18.679    6.914   -0.585  1.00 12.70
ATOM   10380  C    GLY  1553      19.761    7.687    0.140  1.00 16.01
ATOM   10381  O    GLY  1553      19.859    8.905   -0.013  1.00 14.75
ATOM   10382  N    HIS  1554      20.563    6.999    0.948  1.00 16.13
ATOM   10383  CA   HIS  1554      21.659    7.665    1.655  1.00 19.25
ATOM   10384  CB   HIS  1554      22.058    6.870    2.901  1.00 18.68
ATOM   10385  CG   HIS  1554      21.002    6.837    3.962  1.00 18.56
ATOM   10386  CD2  HIS  1554      20.261    5.814    4.452  1.00 18.97
ATOM   10387  ND1  HIS  1554      20.599    7.964    4.646  1.00 19.57
ATOM   10388  CE1  HIS  1554      19.654    7.637    5.509  1.00 21.71
ATOM   10389  NE2  HIS  1554      19.429    6.338    5.412  1.00 16.82
ATOM   10390  C    HIS  1554      22.845    7.761    0.692  1.00 20.59
ATOM   10391  O    HIS  1554      22.867    7.081   -0.332  1.00 20.01
ATOM   10392  N    ASP  1555      23.824    8.604    1.023  1.00 23.52
ATOM   10393  CA   ASP  1555      25.007    8.786    0.182  1.00 25.86
ATOM   10394  CB   ASP  1555      25.650   10.153    0.451  1.00 31.31
ATOM   10395  CG   ASP  1555      25.964   10.375    1.919  1.00 34.15
ATOM   10396  OD1  ASP  1555      26.709    9.570    2.509  1.00 37.32
ATOM   10397  OD2  ASP  1555      25.461   11.366    2.489  1.00 40.85
ATOM   10398  C    ASP  1555      26.055    7.695    0.374  1.00 25.31
ATOM   10399  O    ASP  1555      27.045    7.637   -0.356  1.00 27.92
ATOM   10400  N    SER  1556      25.841    6.832    1.359  1.00 21.86
ATOM   10401  CA   SER  1556      26.769    5.742    1.627  1.00 19.58
ATOM   10402  CB   SER  1556      27.890    6.195    2.569  1.00 18.25
ATOM   10403  OG   SER  1556      27.408    6.452    3.880  1.00 19.02
ATOM   10404  C    SER  1556      25.987    4.608    2.264  1.00 18.25
ATOM   10405  O    SER  1556      24.791    4.739    2.491  1.00 16.30
ATOM   10406  N    THR  1557      26.665    3.505    2.560  1.00 16.59
ATOM   10407  CA   THR  1557      26.011    2.353    3.156  1.00 16.89
ATOM   10408  CB   THR  1557      26.639    1.033    2.664  1.00 17.09
ATOM   10409  OG1  THR  1557      27.965    0.921    3.192  1.00 17.06
ATOM   10410  CG2  THR  1557      26.698    0.996    1.134  1.00 17.62
ATOM   10411  C    THR  1557      26.079    2.350    4.682  1.00 16.25
ATOM   10412  O    THR  1557      25.424    1.530    5.315  1.00 16.54
ATOM   10413  N    LEU  1558      26.858    3.257    5.274  1.00 15.68
ATOM   10414  CA   LEU  1558      27.018    3.301    6.738  1.00 16.74
ATOM   10415  CB   LEU  1558      27.954    4.450    7.141  1.00 17.19
ATOM   10416  CG   LEU  1558      29.465    4.181    7.061  1.00 17.43
ATOM   10417  CD1  LEU  1558      29.864    3.894    5.620  1.00 17.48
ATOM   10418  CD2  LEU  1558      30.223    5.395    7.599  1.00 18.51
ATOM   10419  C    LEU  1558      25.747    3.376    7.596  1.00 15.47
ATOM   10420  O    LEU  1558      25.676    2.770    8.666  1.00 14.85
ATOM   10421  N    PRO  1559      24.736    4.134    7.156  1.00 16.50
ATOM   10422  CD   PRO  1559      24.743    5.128    6.072  1.00 15.31
ATOM   10423  CA   PRO  1559      23.507    4.227    7.951  1.00 15.63
```

```
ATOM   10424  CB   PRO  1559     22.736    5.358    7.271  1.00 18.98
ATOM   10425  CG   PRO  1559     23.279    5.362    5.865  1.00 21.76
ATOM   10426  C    PRO  1559     22.685    2.940    8.055  1.00 15.29
ATOM   10427  O    PRO  1559     21.786    2.840    8.894  1.00 16.41
ATOM   10428  N    VAL  1560     22.988    1.951    7.223  1.00 14.37
ATOM   10429  CA   VAL  1560     22.236    0.703    7.263  1.00 13.86
ATOM   10430  CB   VAL  1560     22.636   -0.220    6.088  1.00 13.89
ATOM   10431  CG1  VAL  1560     21.928   -1.553    6.199  1.00 15.90
ATOM   10432  CG2  VAL  1560     22.293    0.446    4.773  1.00 12.67
ATOM   10433  C    VAL  1560     22.500   -0.025    8.579  1.00 13.66
ATOM   10434  O    VAL  1560     23.653   -0.180    8.993  1.00 12.04
ATOM   10435  N    THR  1561     21.448   -0.467    9.254  1.00 14.89
ATOM   10436  CA   THR  1561     21.676   -1.191   10.500  1.00 18.92
ATOM   10437  CB   THR  1561     21.076   -0.416   11.713  1.00 25.70
ATOM   10438  OG1  THR  1561     22.006    0.601   12.128  1.00 30.54
ATOM   10439  CG2  THR  1561     20.806   -1.340   12.899  1.00 27.97
ATOM   10440  C    THR  1561     21.179   -2.632   10.388  1.00 17.00
ATOM   10441  O    THR  1561     20.535   -2.998    9.405  1.00 13.03
ATOM   10442  N    VAL  1562     21.516   -3.458   11.375  1.00 14.93
ATOM   10443  CA   VAL  1562     21.134   -4.868   11.378  1.00 13.72
ATOM   10444  CB   VAL  1562     21.617   -5.554   12.691  1.00 14.94
ATOM   10445  CG1  VAL  1562     21.157   -7.006   12.747  1.00 13.33
ATOM   10446  CG2  VAL  1562     23.136   -5.481   12.760  1.00 15.87
ATOM   10447  C    VAL  1562     19.633   -5.044   11.218  1.00 13.79
ATOM   10448  O    VAL  1562     19.184   -5.919   10.477  1.00 11.90
ATOM   10449  N    ALA  1563     18.862   -4.205   11.906  1.00 12.57
ATOM   10450  CA   ALA  1563     17.410   -4.266   11.818  1.00 13.52
ATOM   10451  CB   ALA  1563     16.793   -3.175   12.665  1.00 15.49
ATOM   10452  C    ALA  1563     16.967   -4.106   10.367  1.00 13.22
ATOM   10453  O    ALA  1563     16.055   -4.796    9.905  1.00 11.97
ATOM   10454  N    ASP  1564     17.603   -3.185    9.649  1.00 13.76
ATOM   10455  CA   ASP  1564     17.258   -2.973    8.243  1.00 14.61
ATOM   10456  CB   ASP  1564     18.111   -1.873    7.601  1.00 12.63
ATOM   10457  CG   ASP  1564     17.836   -0.491    8.172  1.00 15.27
ATOM   10458  OD1  ASP  1564     16.732   -0.262    8.711  1.00 12.78
ATOM   10459  OD2  ASP  1564     18.735    0.359    8.042  1.00 13.15
ATOM   10460  C    ASP  1564     17.501   -4.243    7.448  1.00 13.99
ATOM   10461  O    ASP  1564     16.647   -4.696    6.685  1.00 12.31
ATOM   10462  N    ILE  1565     18.696   -4.802    7.602  1.00 12.52
ATOM   10463  CA   ILE  1565     19.042   -6.019    6.878  1.00 11.04
ATOM   10464  CB   ILE  1565     20.450   -6.514    7.251  1.00 12.44
ATOM   10465  CG2  ILE  1565     20.699   -7.867    6.594  1.00 12.14
ATOM   10466  CG1  ILE  1565     21.501   -5.478    6.817  1.00  9.14
ATOM   10467  CD1  ILE  1565     21.658   -5.322    5.303  1.00 13.72
ATOM   10468  C    ILE  1565     18.034   -7.132    7.160  1.00 11.12
ATOM   10469  O    ILE  1565     17.606   -7.822    6.247  1.00 10.33
ATOM   10470  N    ALA  1566     17.651   -7.309    8.422  1.00  9.51
ATOM   10471  CA   ALA  1566     16.699   -8.364    8.743  1.00 10.56
ATOM   10472  CB   ALA  1566     16.495   -8.460   10.241  1.00 10.34
ATOM   10473  C    ALA  1566     15.365   -8.141    8.050  1.00  8.48
ATOM   10474  O    ALA  1566     14.744   -9.084    7.553  1.00 10.65
ATOM   10475  N    TYR  1567     14.919   -6.894    8.028  1.00 10.49
ATOM   10476  CA   TYR  1567     13.644   -6.538    7.394  1.00 10.89
ATOM   10477  CB   TYR  1567     13.426   -5.023    7.478  1.00 11.37
ATOM   10478  CG   TYR  1567     12.216   -4.515    6.708  1.00 13.66
ATOM   10479  CD1  TYR  1567     10.925   -4.761    7.163  1.00 12.46
ATOM   10480  CE1  TYR  1567      9.816   -4.222    6.513  1.00 14.53
ATOM   10481  CD2  TYR  1567     12.373   -3.724    5.568  1.00 15.00
ATOM   10482  CE2  TYR  1567     11.277   -3.180    4.909  1.00 14.51
ATOM   10483  CZ   TYR  1567     10.002   -3.429    5.391  1.00 14.84
ATOM   10484  OH   TYR  1567      8.917   -2.852    4.784  1.00 13.91
ATOM   10485  C    TYR  1567     13.639   -6.960    5.933  1.00 10.89
ATOM   10486  O    TYR  1567     12.708   -7.617    5.460  1.00 10.65
ATOM   10487  N    HIS  1568     14.682   -6.558    5.217  1.00 10.43
ATOM   10488  CA   HIS  1568     14.775   -6.881    3.801  1.00 10.21
ATOM   10489  CB   HIS  1568     15.842   -5.998    3.140  1.00 11.31
ATOM   10490  CG   HIS  1568     15.411   -4.565    2.971  1.00 11.56
ATOM   10491  CD2  HIS  1568     15.646   -3.467    3.731  1.00 11.51
ATOM   10492  ND1  HIS  1568     14.579   -4.149    1.953  1.00 12.16
ATOM   10493  CE1  HIS  1568     14.319   -2.861    2.091  1.00 13.74
ATOM   10494  NE2  HIS  1568     14.954   -2.422    3.163  1.00 12.66
ATOM   10495  C    HIS  1568     15.044   -8.370    3.594  1.00 11.46
ATOM   10496  O    HIS  1568     14.540   -8.977    2.643  1.00 10.22
ATOM   10497  N    THR  1569     15.819   -8.970    4.492  1.00 10.71
ATOM   10498  CA   THR  1569     16.104  -10.397    4.390  1.00 10.69
ATOM   10499  CB   THR  1569     17.054  -10.853    5.521  1.00 12.47
ATOM   10500  OG1  THR  1569     18.347  -10.273    5.306  1.00 10.54
```

```
ATOM   10501   CG2  THR   1569      17.169 -12.392   5.559  1.00 11.72
ATOM   10502   C    THR   1569      14.822 -11.236   4.436  1.00 12.77
ATOM   10503   O    THR   1569      14.657 -12.170   3.646  1.00 11.27
ATOM   10504   N    ALA   1570      13.915 -10.915   5.359  1.00 11.72
ATOM   10505   CA   ALA   1570      12.666 -11.671   5.471  1.00 13.45
ATOM   10506   CB   ALA   1570      11.861 -11.200   6.689  1.00 12.98
ATOM   10507   C    ALA   1570      11.819 -11.544   4.211  1.00 12.73
ATOM   10508   O    ALA   1570      11.182 -12.506   3.784  1.00 13.55
ATOM   10509   N    ALA   1571      11.804 -10.348   3.628  1.00 12.25
ATOM   10510   CA   ALA   1571      11.028 -10.110   2.422  1.00 10.68
ATOM   10511   CB   ALA   1571      11.014  -8.619   2.086  1.00 10.51
ATOM   10512   C    ALA   1571      11.615 -10.907   1.262  1.00 11.99
ATOM   10513   O    ALA   1571      10.881 -11.499   0.477  1.00 11.47
ATOM   10514   N    VAL   1572      12.939 -10.923   1.144  1.00 13.05
ATOM   10515   CA   VAL   1572      13.553 -11.687   0.064  1.00 13.95
ATOM   10516   CB   VAL   1572      15.075 -11.473   0.004  1.00 13.81
ATOM   10517   CG1  VAL   1572      15.701 -12.485  -0.954  1.00 14.45
ATOM   10518   CG2  VAL   1572      15.379 -10.050  -0.458  1.00 14.01
ATOM   10519   C    VAL   1572      13.271 -13.178   0.239  1.00 14.25
ATOM   10520   O    VAL   1572      12.956 -13.888  -0.727  1.00 14.24
ATOM   10521   N    ARG   1573      13.388 -13.659   1.471  1.00 13.28
ATOM   10522   CA   ARG   1573      13.137 -15.066   1.733  1.00 12.96
ATOM   10523   CB   ARG   1573      13.418 -15.409   3.208  1.00 12.40
ATOM   10524   CG   ARG   1573      13.134 -16.875   3.564  1.00 14.12
ATOM   10525   CD   ARG   1573      13.891 -17.820   2.636  1.00 11.99
ATOM   10526   NE   ARG   1573      15.299 -17.944   3.009  1.00 15.31
ATOM   10527   CZ   ARG   1573      16.238 -18.497   2.248  1.00 17.73
ATOM   10528   NH1  ARG   1573      15.931 -18.981   1.048  1.00 18.85
ATOM   10529   NH2  ARG   1573      17.486 -18.589   2.696  1.00 15.43
ATOM   10530   C    ARG   1573      11.701 -15.460   1.358  1.00 12.91
ATOM   10531   O    ARG   1573      11.467 -16.569   0.882  1.00 14.66
ATOM   10532   N    ARG   1574      10.740 -14.561   1.559  1.00 15.46
ATOM   10533   CA   ARG   1574       9.356 -14.883   1.214  1.00 13.92
ATOM   10534   CB   ARG   1574       8.392 -13.802   1.707  1.00 14.87
ATOM   10535   CG   ARG   1574       8.358 -13.622   3.212  1.00 17.41
ATOM   10536   CD   ARG   1574       7.182 -12.767   3.655  1.00 17.23
ATOM   10537   NE   ARG   1574       7.241 -12.534   5.096  1.00 19.59
ATOM   10538   CZ   ARG   1574       7.851 -11.505   5.673  1.00 20.15
ATOM   10539   NH1  ARG   1574       8.459 -10.577   4.939  1.00 17.97
ATOM   10540   NH2  ARG   1574       7.882 -11.421   6.995  1.00 23.22
ATOM   10541   C    ARG   1574       9.210 -15.013  -0.294  1.00 13.49
ATOM   10542   O    ARG   1574       8.380 -15.777  -0.786  1.00 14.10
ATOM   10543   N    GLY   1575      10.017 -14.256  -1.024  1.00 12.47
ATOM   10544   CA   GLY   1575       9.949 -14.297  -2.474  1.00 15.24
ATOM   10545   C    GLY   1575      10.693 -15.461  -3.096  1.00 16.10
ATOM   10546   O    GLY   1575      10.307 -15.961  -4.150  1.00 17.71
ATOM   10547   N    ALA   1576      11.761 -15.894  -2.441  1.00 15.51
ATOM   10548   CA   ALA   1576      12.577 -16.990  -2.950  1.00 16.76
ATOM   10549   CB   ALA   1576      13.834 -16.430  -3.584  1.00 18.02
ATOM   10550   C    ALA   1576      12.935 -17.923  -1.800  1.00 16.86
ATOM   10551   O    ALA   1576      14.065 -17.923  -1.318  1.00 17.30
ATOM   10552   N    PRO   1577      11.977 -18.756  -1.368  1.00 18.36
ATOM   10553   CD   PRO   1577      10.647 -18.935  -1.980  1.00 17.74
ATOM   10554   CA   PRO   1577      12.176 -19.696  -0.262  1.00 19.18
ATOM   10555   CB   PRO   1577      10.783 -20.287  -0.063  1.00 19.74
ATOM   10556   CG   PRO   1577      10.218 -20.291  -1.442  1.00 22.52
ATOM   10557   C    PRO   1577      13.255 -20.767  -0.421  1.00 21.10
ATOM   10558   O    PRO   1577      13.664 -21.380   0.566  1.00 21.21
ATOM   10559   N    ASN   1578      13.725 -20.987  -1.647  1.00 19.12
ATOM   10560   CA   ASN   1578      14.741 -22.008  -1.879  1.00 19.33
ATOM   10561   CB   ASN   1578      14.237 -23.029  -2.898  1.00 23.93
ATOM   10562   CG   ASN   1578      12.980 -23.737  -2.435  1.00 26.55
ATOM   10563   OD1  ASN   1578      12.942 -24.304  -1.344  1.00 30.38
ATOM   10564   ND2  ASN   1578      11.942 -23.707  -3.266  1.00 30.04
ATOM   10565   C    ASN   1578      16.077 -21.465  -2.347  1.00 18.42
ATOM   10566   O    ASN   1578      16.972 -22.230  -2.711  1.00 17.87
ATOM   10567   N    CYS   1579      16.230 -20.148  -2.333  1.00 16.75
ATOM   10568   CA   CYS   1579      17.486 -19.565  -2.794  1.00 16.63
ATOM   10569   CB   CYS   1579      17.268 -18.119  -3.256  1.00 18.58
ATOM   10570   SG   CYS   1579      17.273 -16.870  -1.911  1.00 20.66
ATOM   10571   C    CYS   1579      18.550 -19.569  -1.708  1.00 16.46
ATOM   10572   O    CYS   1579      18.254 -19.737  -0.523  1.00 16.94
ATOM   10573   N    LEU   1580      19.797 -19.406  -2.127  1.00 16.30
ATOM   10574   CA   LEU   1580      20.901 -19.306  -1.183  1.00 16.34
ATOM   10575   CB   LEU   1580      22.225 -19.741  -1.820  1.00 16.18
ATOM   10576   CG   LEU   1580      23.496 -19.451  -1.005  1.00 16.78
ATOM   10577   CD1  LEU   1580      23.455 -20.123   0.360  1.00 18.05
```

```
ATOM   10578  CD2 LEU  1580      24.697 -19.931  -1.797  1.00 19.94
ATOM   10579  C   LEU  1580      20.894 -17.803  -0.914  1.00 16.05
ATOM   10580  O   LEU  1580      21.150 -16.998  -1.813  1.00 13.83
ATOM   10581  N   LEU  1581      20.568 -17.437   0.321  1.00 16.04
ATOM   10582  CA  LEU  1581      20.455 -16.039   0.704  1.00 15.99
ATOM   10583  CB  LEU  1581      19.135 -15.812   1.472  1.00 16.23
ATOM   10584  CG  LEU  1581      18.506 -14.413   1.600  1.00 17.05
ATOM   10585  CD1 LEU  1581      17.114 -14.552   2.230  1.00 16.42
ATOM   10586  CD2 LEU  1581      19.380 -13.487   2.444  1.00 19.60
ATOM   10587  C   LEU  1581      21.617 -15.583   1.569  1.00 16.66
ATOM   10588  O   LEU  1581      21.781 -16.063   2.684  1.00 15.52
ATOM   10589  N   LEU  1582      22.428 -14.679   1.032  1.00 15.45
ATOM   10590  CA  LEU  1582      23.536 -14.105   1.761  1.00 16.37
ATOM   10591  CB  LEU  1582      24.732 -13.839   0.850  1.00 17.30
ATOM   10592  CG  LEU  1582      25.836 -14.894   0.746  1.00 18.08
ATOM   10593  CD1 LEU  1582      25.274 -16.177   0.172  1.00 19.04
ATOM   10594  CD2 LEU  1582      26.966 -14.348  -0.130  1.00 20.45
ATOM   10595  C   LEU  1582      23.032 -12.769   2.290  1.00 16.32
ATOM   10596  O   LEU  1582      22.308 -12.046   1.593  1.00 18.36
ATOM   10597  N   ALA  1583      23.399 -12.447   3.521  1.00 15.51
ATOM   10598  CA  ALA  1583      22.999 -11.183   4.111  1.00 14.69
ATOM   10599  CB  ALA  1583      21.994 -11.416   5.219  1.00 14.69
ATOM   10600  C   ALA  1583      24.234 -10.491   4.667  1.00 14.14
ATOM   10601  O   ALA  1583      25.051 -11.112   5.344  1.00 13.73
ATOM   10602  N   ASP  1584      24.376  -9.207   4.362  1.00 13.35
ATOM   10603  CA  ASP  1584      25.505  -8.429   4.855  1.00 14.49
ATOM   10604  CB  ASP  1584      25.647  -7.117   4.091  1.00 15.94
ATOM   10605  CG  ASP  1584      26.458  -7.241   2.830  1.00 17.35
ATOM   10606  OD1 ASP  1584      27.193  -8.226   2.661  1.00 20.03
ATOM   10607  OD2 ASP  1584      26.357  -6.311   2.006  1.00 18.72
ATOM   10608  C   ASP  1584      25.332  -8.032   6.304  1.00 13.45
ATOM   10609  O   ASP  1584      24.219  -7.753   6.739  1.00 12.56
ATOM   10610  N   LEU  1585      26.427  -8.040   7.056  1.00 12.65
ATOM   10611  CA  LEU  1585      26.381  -7.514   8.410  1.00 13.11
ATOM   10612  CB  LEU  1585      27.360  -8.227   9.356  1.00 13.48
ATOM   10613  CG  LEU  1585      26.969  -9.646   9.777  1.00 13.68
ATOM   10614  CD1 LEU  1585      27.863 -10.134  10.933  1.00 12.03
ATOM   10615  CD2 LEU  1585      25.504  -9.664  10.207  1.00 14.07
ATOM   10616  C   LEU  1585      26.877  -6.102   8.080  1.00 15.51
ATOM   10617  O   LEU  1585      27.954  -5.926   7.483  1.00 15.43
ATOM   10618  N   PRO  1586      26.083  -5.082   8.422  1.00 14.53
ATOM   10619  CD  PRO  1586      24.747  -5.205   9.030  1.00 16.55
ATOM   10620  CA  PRO  1586      26.413  -3.681   8.163  1.00 14.80
ATOM   10621  CB  PRO  1586      25.078  -2.974   8.385  1.00 14.42
ATOM   10622  CG  PRO  1586      24.459  -3.794   9.483  1.00 15.58
ATOM   10623  C   PRO  1586      27.540  -3.066   8.993  1.00 15.36
ATOM   10624  O   PRO  1586      28.135  -3.709   9.864  1.00 13.48
ATOM   10625  N   PHE  1587      27.808  -1.799   8.695  1.00 13.29
ATOM   10626  CA  PHE  1587      28.831  -1.006   9.359  1.00 15.40
ATOM   10627  CB  PHE  1587      28.626   0.466   8.995  1.00 15.27
ATOM   10628  CG  PHE  1587      29.456   1.415   9.808  1.00 16.43
ATOM   10629  CD1 PHE  1587      30.845   1.346   9.776  1.00 15.91
ATOM   10630  CD2 PHE  1587      28.848   2.378  10.610  1.00 16.81
ATOM   10631  CE1 PHE  1587      31.619   2.215  10.533  1.00 19.06
ATOM   10632  CE2 PHE  1587      29.619   3.257  11.374  1.00 18.87
ATOM   10633  CZ  PHE  1587      31.009   3.174  11.332  1.00 18.40
ATOM   10634  C   PHE  1587      28.804  -1.176  10.875  1.00 14.93
ATOM   10635  O   PHE  1587      27.783  -0.954  11.513  1.00 13.77
ATOM   10636  N   MET  1588      29.944  -1.580  11.431  1.00 16.41
ATOM   10637  CA  MET  1588      30.115  -1.783  12.866  1.00 15.60
ATOM   10638  CB  MET  1588      29.958  -0.452  13.610  1.00 15.47
ATOM   10639  CG  MET  1588      30.753  -0.398  14.899  1.00 17.28
ATOM   10640  SD  MET  1588      32.552  -0.481  14.654  1.00 16.90
ATOM   10641  CE  MET  1588      32.900   1.224  14.358  1.00 19.88
ATOM   10642  C   MET  1588      29.182  -2.825  13.480  1.00 14.81
ATOM   10643  O   MET  1588      28.832  -2.742  14.659  1.00 16.79
ATOM   10644  N   ALA  1589      28.782  -3.809  12.689  1.00 13.82
ATOM   10645  CA  ALA  1589      27.901  -4.853  13.196  1.00 14.09
ATOM   10646  CB  ALA  1589      26.873  -5.228  12.123  1.00 14.61
ATOM   10647  C   ALA  1589      28.707  -6.079  13.617  1.00 14.92
ATOM   10648  O   ALA  1589      28.148  -7.055  14.116  1.00 17.78
ATOM   10649  N   TYR  1590      30.024  -6.023  13.421  1.00 14.09
ATOM   10650  CA  TYR  1590      30.911  -7.130  13.775  1.00 15.98
ATOM   10651  CB  TYR  1590      31.164  -8.010  12.543  1.00 16.40
ATOM   10652  CG  TYR  1590      31.512  -7.250  11.277  1.00 15.39
ATOM   10653  CD1 TYR  1590      32.816  -7.232  10.783  1.00 13.60
ATOM   10654  CE1 TYR  1590      33.127  -6.558   9.596  1.00 15.26
```

```
ATOM  10655  CD2  TYR  1590    30.524  -6.571  10.559  1.00 14.41
ATOM  10656  CE2  TYR  1590    30.818  -5.895   9.378  1.00 14.95
ATOM  10657  CZ   TYR  1590    32.118  -5.895   8.901  1.00 14.53
ATOM  10658  OH   TYR  1590    32.380  -5.247   7.718  1.00 14.98
ATOM  10659  C    TYR  1590    32.225  -6.601  14.334  1.00 16.91
ATOM  10660  O    TYR  1590    33.303  -7.077  13.980  1.00 17.15
ATOM  10661  N    ALA  1591    32.109  -5.626  15.235  1.00 16.90
ATOM  10662  CA   ALA  1591    33.257  -4.973  15.863  1.00 18.12
ATOM  10663  CB   ALA  1591    32.790  -3.734  16.617  1.00 16.82
ATOM  10664  C    ALA  1591    34.012  -5.909  16.798  1.00 17.70
ATOM  10665  O    ALA  1591    35.212  -5.759  17.005  1.00 16.35
ATOM  10666  N    THR  1592    33.289  -6.868  17.366  1.00 17.84
ATOM  10667  CA   THR  1592    33.871  -7.863  18.254  1.00 17.19
ATOM  10668  CB   THR  1592    33.583  -7.570  19.739  1.00 17.53
ATOM  10669  OG1  THR  1592    32.176  -7.682  19.991  1.00 16.88
ATOM  10670  CG2  THR  1592    34.059  -6.169  20.112  1.00 16.17
ATOM  10671  C    THR  1592    33.208  -9.184  17.900  1.00 15.81
ATOM  10672  O    THR  1592    32.114  -9.201  17.329  1.00 13.62
ATOM  10673  N    PRO  1593    33.860 -10.310  18.223  1.00 16.07
ATOM  10674  CD   PRO  1593    35.254 -10.465  18.675  1.00 16.83
ATOM  10675  CA   PRO  1593    33.260 -11.607  17.903  1.00 16.05
ATOM  10676  CB   PRO  1593    34.278 -12.599  18.459  1.00 17.78
ATOM  10677  CG   PRO  1593    35.587 -11.877  18.233  1.00 16.98
ATOM  10678  C    PRO  1593    31.874 -11.769  18.531  1.00 16.88
ATOM  10679  O    PRO  1593    30.934 -12.190  17.858  1.00 15.90
ATOM  10680  N    GLU  1594    31.746 -11.417  19.810  1.00 17.16
ATOM  10681  CA   GLU  1594    30.467 -11.548  20.507  1.00 17.81
ATOM  10682  CB   GLU  1594    30.606 -11.095  21.966  1.00 21.81
ATOM  10683  CG   GLU  1594    29.392 -11.407  22.830  1.00 29.07
ATOM  10684  CD   GLU  1594    29.657 -11.163  24.308  1.00 34.97
ATOM  10685  OE1  GLU  1594    30.087 -10.036  24.649  1.00 37.17
ATOM  10686  OE2  GLU  1594    29.429 -12.091  25.124  1.00 37.45
ATOM  10687  C    GLU  1594    29.369 -10.755  19.817  1.00 16.20
ATOM  10688  O    GLU  1594    28.233 -11.210  19.721  1.00 14.75
ATOM  10689  N    GLN  1595    29.708  -9.568  19.326  1.00 16.15
ATOM  10690  CA   GLN  1595    28.715  -8.749  18.645  1.00 16.61
ATOM  10691  CB   GLN  1595    29.209  -7.319  18.489  1.00 19.07
ATOM  10692  CG   GLN  1595    29.345  -6.591  19.814  1.00 25.36
ATOM  10693  CD   GLN  1595    29.618  -5.113  19.634  1.00 28.24
ATOM  10694  OE1  GLN  1595    28.854  -4.411  18.974  1.00 30.74
ATOM  10695  NE2  GLN  1595    30.709  -4.629  20.228  1.00 31.60
ATOM  10696  C    GLN  1595    28.401  -9.344  17.282  1.00 13.90
ATOM  10697  O    GLN  1595    27.261  -9.290  16.826  1.00 12.90
ATOM  10698  N    ALA  1596    29.410  -9.918  16.636  1.00 12.16
ATOM  10699  CA   ALA  1596    29.184 -10.530  15.339  1.00 12.33
ATOM  10700  CB   ALA  1596    30.494 -10.993  14.730  1.00 11.02
ATOM  10701  C    ALA  1596    28.212 -11.702  15.484  1.00 12.04
ATOM  10702  O    ALA  1596    27.345 -11.897  14.632  1.00 11.82
ATOM  10703  N    PHE  1597    28.340 -12.470  16.566  1.00 13.20
ATOM  10704  CA   PHE  1597    27.460 -13.630  16.787  1.00 12.23
ATOM  10705  CB   PHE  1597    27.823 -14.392  18.077  1.00 11.34
ATOM  10706  CG   PHE  1597    29.267 -14.829  18.165  1.00 12.72
ATOM  10707  CD1  PHE  1597    29.996 -15.142  17.018  1.00 14.75
ATOM  10708  CD2  PHE  1597    29.881 -14.963  19.406  1.00 13.59
ATOM  10709  CE1  PHE  1597    31.323 -15.586  17.107  1.00 15.56
ATOM  10710  CE2  PHE  1597    31.204 -15.407  19.513  1.00 13.42
ATOM  10711  CZ   PHE  1597    31.921 -15.718  18.354  1.00 15.98
ATOM  10712  C    PHE  1597    26.005 -13.205  16.912  1.00 12.63
ATOM  10713  O    PHE  1597    25.114 -13.834  16.346  1.00 12.34
ATOM  10714  N    GLU  1598    25.778 -12.134  17.667  1.00 12.52
ATOM  10715  CA   GLU  1598    24.434 -11.641  17.892  1.00 13.41
ATOM  10716  CB   GLU  1598    24.456 -10.541  18.955  1.00 16.36
ATOM  10717  CG   GLU  1598    23.081 -10.001  19.313  1.00 23.47
ATOM  10718  CD   GLU  1598    22.273 -10.950  20.189  1.00 28.97
ATOM  10719  OE1  GLU  1598    22.481 -12.188  20.109  1.00 31.03
ATOM  10720  OE2  GLU  1598    21.414 -10.452  20.953  1.00 32.01
ATOM  10721  C    GLU  1598    23.783 -11.113  16.615  1.00 12.74
ATOM  10722  O    GLU  1598    22.634 -11.425  16.321  1.00 11.28
ATOM  10723  N    ASN  1599    24.518 -10.316  15.852  1.00 12.02
ATOM  10724  CA   ASN  1599    23.953  -9.758  14.640  1.00 11.59
ATOM  10725  CB   ASN  1599    24.740  -8.513  14.228  1.00 12.97
ATOM  10726  CG   ASN  1599    24.671  -7.422  15.295  1.00 13.26
ATOM  10727  OD1  ASN  1599    23.617  -7.218  15.908  1.00 13.34
ATOM  10728  ND2  ASN  1599    25.774  -6.712  15.510  1.00 13.73
ATOM  10729  C    ASN  1599    23.865 -10.771  13.507  1.00 11.88
ATOM  10730  O    ASN  1599    22.961 -10.696  12.677  1.00 11.95
ATOM  10731  N    ALA  1600    24.790 -11.724  13.471  1.00  9.53
```

ATOM	10732	CA	ALA	1600	24.732	-12.754	12.440	1.00	11.81
ATOM	10733	CB	ALA	1600	25.994	-13.610	12.462	1.00	11.15
ATOM	10734	C	ALA	1600	23.503	-13.615	12.742	1.00	11.76
ATOM	10735	O	ALA	1600	22.763	-13.990	11.838	1.00	12.58
ATOM	10736	N	ALA	1601	23.283	-13.922	14.019	1.00	11.05
ATOM	10737	CA	ALA	1601	22.142	-14.746	14.391	1.00	11.07
ATOM	10738	CB	ALA	1601	22.183	-15.080	15.889	1.00	12.88
ATOM	10739	C	ALA	1601	20.830	-14.051	14.038	1.00	11.65
ATOM	10740	O	ALA	1601	19.868	-14.700	13.624	1.00	12.48
ATOM	10741	N	THR	1602	20.782	-12.735	14.198	1.00	10.09
ATOM	10742	CA	THR	1602	19.565	-11.980	13.884	1.00	10.55
ATOM	10743	CB	THR	1602	19.718	-10.486	14.224	1.00	10.24
ATOM	10744	OG1	THR	1602	19.875	-10.342	15.638	1.00	12.17
ATOM	10745	CG2	THR	1602	18.491	-9.703	13.773	1.00	11.96
ATOM	10746	C	THR	1602	19.211	-12.089	12.408	1.00	11.71
ATOM	10747	O	THR	1602	18.060	-12.356	12.052	1.00	10.21
ATOM	10748	N	VAL	1603	20.193	-11.884	11.538	1.00	8.99
ATOM	10749	CA	VAL	1603	19.897	-11.956	10.120	1.00	10.74
ATOM	10750	CB	VAL	1603	20.997	-11.276	9.280	1.00	12.65
ATOM	10751	CG1	VAL	1603	20.519	-11.129	7.858	1.00	19.78
ATOM	10752	CG2	VAL	1603	21.309	-9.885	9.854	1.00	13.29
ATOM	10753	C	VAL	1603	19.679	-13.401	9.675	1.00	10.88
ATOM	10754	O	VAL	1603	18.931	-13.651	8.733	1.00	11.56
ATOM	10755	N	MET	1604	20.322	-14.354	10.352	1.00	10.50
ATOM	10756	CA	MET	1604	20.118	-15.768	10.024	1.00	11.08
ATOM	10757	CB	MET	1604	21.082	-16.672	10.806	1.00	15.41
ATOM	10758	CG	MET	1604	22.562	-16.538	10.462	1.00	18.50
ATOM	10759	SD	MET	1604	22.958	-17.034	8.795	1.00	27.30
ATOM	10760	CE	MET	1604	22.871	-18.884	8.916	1.00	21.09
ATOM	10761	C	MET	1604	18.677	-16.169	10.383	1.00	10.81
ATOM	10762	O	MET	1604	17.984	-16.794	9.584	1.00	13.07
ATOM	10763	N	ARG	1605	18.222	-15.811	11.584	1.00	11.02
ATOM	10764	CA	ARG	1605	16.861	-16.158	11.992	1.00	12.52
ATOM	10765	CB	ARG	1605	16.582	-15.724	13.444	1.00	13.71
ATOM	10766	CG	ARG	1605	17.431	-16.445	14.496	1.00	13.88
ATOM	10767	CD	ARG	1605	16.798	-16.395	15.889	1.00	14.01
ATOM	10768	NE	ARG	1605	17.771	-16.750	16.919	1.00	18.79
ATOM	10769	CZ	ARG	1605	18.649	-15.898	17.433	1.00	18.25
ATOM	10770	NH1	ARG	1605	18.670	-14.636	17.025	1.00	18.55
ATOM	10771	NH2	ARG	1605	19.521	-16.314	18.333	1.00	18.62
ATOM	10772	C	ARG	1605	15.814	-15.534	11.070	1.00	12.91
ATOM	10773	O	ARG	1605	14.724	-16.090	10.900	1.00	12.21
ATOM	10774	N	ALA	1606	16.141	-14.386	10.481	1.00	11.94
ATOM	10775	CA	ALA	1606	15.223	-13.704	9.575	1.00	12.22
ATOM	10776	CB	ALA	1606	15.632	-12.232	9.409	1.00	11.74
ATOM	10777	C	ALA	1606	15.136	-14.374	8.199	1.00	13.18
ATOM	10778	O	ALA	1606	14.274	-14.021	7.392	1.00	14.17
ATOM	10779	N	GLY	1607	16.023	-15.331	7.929	1.00	12.39
ATOM	10780	CA	GLY	1607	15.980	-16.029	6.653	1.00	11.87
ATOM	10781	C	GLY	1607	17.288	-16.273	5.907	1.00	11.83
ATOM	10782	O	GLY	1607	17.316	-17.063	4.960	1.00	15.36
ATOM	10783	N	ALA	1608	18.368	-15.612	6.316	1.00	11.14
ATOM	10784	CA	ALA	1608	19.668	-15.767	5.651	1.00	11.81
ATOM	10785	CB	ALA	1608	20.621	-14.689	6.146	1.00	13.69
ATOM	10786	C	ALA	1608	20.294	-17.151	5.870	1.00	13.84
ATOM	10787	O	ALA	1608	20.013	-17.799	6.870	1.00	11.53
ATOM	10788	N	ASN	1609	21.135	-17.602	4.934	1.00	13.34
ATOM	10789	CA	ASN	1609	21.814	-18.895	5.077	1.00	13.10
ATOM	10790	CB	ASN	1609	21.736	-19.734	3.797	1.00	14.21
ATOM	10791	CG	ASN	1609	20.321	-20.082	3.407	1.00	15.93
ATOM	10792	OD1	ASN	1609	19.606	-20.775	4.137	1.00	18.98
ATOM	10793	ND2	ASN	1609	19.910	-19.610	2.250	1.00	12.95
ATOM	10794	C	ASN	1609	23.293	-18.648	5.344	1.00	14.73
ATOM	10795	O	ASN	1609	24.021	-19.533	5.794	1.00	15.75
ATOM	10796	N	MET	1610	23.732	-17.435	5.049	1.00	13.00
ATOM	10797	CA	MET	1610	25.132	-17.083	5.197	1.00	13.92
ATOM	10798	CB	MET	1610	25.864	-17.514	3.925	1.00	14.99
ATOM	10799	CG	MET	1610	27.293	-17.047	3.789	1.00	18.34
ATOM	10800	SD	MET	1610	27.934	-17.568	2.175	1.00	19.59
ATOM	10801	CE	MET	1610	28.973	-18.934	2.662	1.00	21.61
ATOM	10802	C	MET	1610	25.270	-15.586	5.421	1.00	13.22
ATOM	10803	O	MET	1610	24.400	-14.808	5.028	1.00	12.57
ATOM	10804	N	VAL	1611	26.366	-15.185	6.053	1.00	13.16
ATOM	10805	CA	VAL	1611	26.603	-13.782	6.336	1.00	14.59
ATOM	10806	CB	VAL	1611	26.750	-13.580	7.859	1.00	18.07
ATOM	10807	CG1	VAL	1611	27.320	-12.237	8.152	1.00	23.20
ATOM	10808	CG2	VAL	1611	25.389	-13.741	8.535	1.00	17.45

```
ATOM   10809  C    VAL  1611      27.853 -13.289    5.621  1.00 15.11
ATOM   10810  O    VAL  1611      28.844 -14.016    5.518  1.00 13.59
ATOM   10811  N    LYS  1612      27.797 -12.061    5.108  1.00 13.93
ATOM   10812  CA   LYS  1612      28.942 -11.471    4.420  1.00 13.65
ATOM   10813  CB   LYS  1612      28.541 -10.980    3.023  1.00 16.26
ATOM   10814  CG   LYS  1612      29.718 -10.435    2.207  1.00 16.17
ATOM   10815  CD   LYS  1612      29.419 -10.402    0.703  1.00 19.74
ATOM   10816  CE   LYS  1612      28.447  -9.294    0.338  1.00 20.53
ATOM   10817  NZ   LYS  1612      29.054  -7.938    0.547  1.00 18.43
ATOM   10818  C    LYS  1612      29.476 -10.307    5.239  1.00 14.73
ATOM   10819  O    LYS  1612      28.709  -9.454    5.680  1.00 15.46
ATOM   10820  N    ILE  1613      30.792 -10.280    5.439  1.00 15.79
ATOM   10821  CA   ILE  1613      31.436  -9.215    6.210  1.00 17.39
ATOM   10822  CB   ILE  1613      31.868  -9.699    7.623  1.00 17.61
ATOM   10823  CG2  ILE  1613      30.642  -9.920    8.507  1.00 18.44
ATOM   10824  CG1  ILE  1613      32.706 -10.972    7.502  1.00 18.71
ATOM   10825  CD1  ILE  1613      33.102 -11.573    8.835  1.00 21.00
ATOM   10826  C    ILE  1613      32.674  -8.698    5.487  1.00 17.52
ATOM   10827  O    ILE  1613      33.363  -9.453    4.805  1.00 17.34
ATOM   10828  N    GLU  1614      32.948  -7.410    5.658  1.00 18.44
ATOM   10829  CA   GLU  1614      34.077  -6.756    5.014  1.00 22.04
ATOM   10830  CB   GLU  1614      33.699  -5.319    4.650  1.00 21.72
ATOM   10831  CG   GLU  1614      32.556  -5.213    3.663  1.00 24.57
ATOM   10832  CD   GLU  1614      32.210  -3.773    3.316  1.00 25.01
ATOM   10833  OE1  GLU  1614      33.048  -2.879    3.551  1.00 25.95
ATOM   10834  OE2  GLU  1614      31.103  -3.535    2.793  1.00 26.44
ATOM   10835  C    GLU  1614      35.330  -6.730    5.879  1.00 22.81
ATOM   10836  O    GLU  1614      35.270  -6.387    7.059  1.00 23.72
ATOM   10837  N    GLY  1615      36.469  -7.082    5.292  1.00 24.76
ATOM   10838  CA   GLY  1615      37.706  -7.063    6.052  1.00 26.31
ATOM   10839  C    GLY  1615      38.657  -8.191    5.724  1.00 25.48
ATOM   10840  O    GLY  1615      38.264  -9.195    5.132  1.00 26.13
ATOM   10841  N    GLY  1616      39.916  -8.024    6.117  1.00 26.28
ATOM   10842  CA   GLY  1616      40.917  -9.043    5.855  1.00 25.88
ATOM   10843  C    GLY  1616      41.395  -9.771    7.101  1.00 26.83
ATOM   10844  O    GLY  1616      40.592 -10.313    7.862  1.00 26.50
ATOM   10845  N    GLU  1617      42.712  -9.780    7.293  1.00 23.60
ATOM   10846  CA   GLU  1617      43.369 -10.427    8.427  1.00 25.78
ATOM   10847  CB   GLU  1617      44.811  -9.923    8.554  1.00 28.43
ATOM   10848  CG   GLU  1617      45.856 -10.775    7.868  1.00 35.94
ATOM   10849  CD   GLU  1617      46.136 -12.074    8.604  1.00 39.30
ATOM   10850  OE1  GLU  1617      45.199 -12.883    8.770  1.00 39.90
ATOM   10851  OE2  GLU  1617      47.299 -12.283    9.015  1.00 39.51
ATOM   10852  C    GLU  1617      42.718 -10.294    9.800  1.00 23.15
ATOM   10853  O    GLU  1617      42.527 -11.289   10.499  1.00 24.44
ATOM   10854  N    TRP  1618      42.404  -9.069   10.202  1.00 22.84
ATOM   10855  CA   TRP  1618      41.830  -8.855   11.518  1.00 20.46
ATOM   10856  CB   TRP  1618      41.607  -7.364   11.776  1.00 21.59
ATOM   10857  CG   TRP  1618      40.461  -6.766   11.040  1.00 19.95
ATOM   10858  CD2  TRP  1618      39.152  -6.510   11.563  1.00 19.68
ATOM   10859  CE2  TRP  1618      38.392  -5.939   10.521  1.00 17.75
ATOM   10860  CE3  TRP  1618      38.544  -6.723   12.809  1.00 18.42
ATOM   10861  CD1  TRP  1618      40.446  -6.348    9.745  1.00 20.31
ATOM   10862  NE1  TRP  1618      39.205  -5.845    9.423  1.00 19.55
ATOM   10863  CZ2  TRP  1618      37.054  -5.557   10.690  1.00 17.13
ATOM   10864  CZ3  TRP  1618      37.214  -6.345   12.977  1.00 18.71
ATOM   10865  CH2  TRP  1618      36.482  -5.771   11.915  1.00 19.07
ATOM   10866  C    TRP  1618      40.544  -9.619   11.787  1.00 20.59
ATOM   10867  O    TRP  1618      40.136  -9.746   12.938  1.00 18.49
ATOM   10868  N    LEU  1619      39.917 -10.144   10.737  1.00 21.43
ATOM   10869  CA   LEU  1619      38.668 -10.886   10.893  1.00 20.49
ATOM   10870  CB   LEU  1619      37.751 -10.622    9.696  1.00 20.97
ATOM   10871  CG   LEU  1619      37.106  -9.238    9.620  1.00 21.93
ATOM   10872  CD1  LEU  1619      36.316  -9.117    8.338  1.00 22.24
ATOM   10873  CD2  LEU  1619      36.200  -9.039   10.833  1.00 23.75
ATOM   10874  C    LEU  1619      38.817 -12.395   11.067  1.00 19.39
ATOM   10875  O    LEU  1619      37.821 -13.094   11.238  1.00 16.11
ATOM   10876  N    VAL  1620      40.047 -12.899   11.034  1.00 18.75
ATOM   10877  CA   VAL  1620      40.284 -14.334   11.174  1.00 18.47
ATOM   10878  CB   VAL  1620      41.798 -14.645   11.309  1.00 20.23
ATOM   10879  CG1  VAL  1620      42.007 -16.107   11.660  1.00 20.87
ATOM   10880  CG2  VAL  1620      42.505 -14.331   10.003  1.00 22.98
ATOM   10881  C    VAL  1620      39.553 -14.972   12.349  1.00 18.83
ATOM   10882  O    VAL  1620      38.847 -15.965   12.173  1.00 18.24
ATOM   10883  N    GLU  1621      39.731 -14.411   13.543  1.00 18.17
ATOM   10884  CA   GLU  1621      39.088 -14.946   14.741  1.00 18.85
ATOM   10885  CB   GLU  1621      39.479 -14.109   15.969  1.00 18.97
```

```
ATOM   10886  CG   GLU   1621       38.815 -14.561  17.256  1.00 22.60
ATOM   10887  CD   GLU   1621       39.265 -13.760  18.471  1.00 25.26
ATOM   10888  OE1  GLU   1621       39.153 -12.515  18.453  1.00 24.17
ATOM   10889  OE2  GLU   1621       39.730 -14.383  19.446  1.00 28.44
ATOM   10890  C    GLU   1621       37.571 -14.962  14.599  1.00 16.87
ATOM   10891  O    GLU   1621       36.915 -15.951  14.909  1.00 16.16
ATOM   10892  N    THR   1622       37.023 -13.855  14.118  1.00 17.23
ATOM   10893  CA   THR   1622       35.583 -13.729  13.938  1.00 15.12
ATOM   10894  CB   THR   1622       35.238 -12.319  13.420  1.00 16.38
ATOM   10895  OG1  THR   1622       35.730 -11.345  14.356  1.00 17.00
ATOM   10896  CG2  THR   1622       33.727 -12.140  13.272  1.00 14.48
ATOM   10897  C    THR   1622       35.048 -14.797  12.985  1.00 15.13
ATOM   10898  O    THR   1622       34.064 -15.464  13.293  1.00 13.37
ATOM   10899  N    VAL   1623       35.696 -14.963  11.832  1.00 13.92
ATOM   10900  CA   VAL   1623       35.258 -15.969  10.862  1.00 14.72
ATOM   10901  CB   VAL   1623       36.102 -15.907   9.569  1.00 14.99
ATOM   10902  CG1  VAL   1623       35.676 -17.017   8.602  1.00 16.56
ATOM   10903  CG2  VAL   1623       35.936 -14.548   8.921  1.00 14.47
ATOM   10904  C    VAL   1623       35.345 -17.382  11.452  1.00 15.17
ATOM   10905  O    VAL   1623       34.424 -18.186  11.308  1.00 13.99
ATOM   10906  N    GLN   1624       36.456 -17.680  12.118  1.00 14.83
ATOM   10907  CA   GLN   1624       36.641 -18.992  12.729  1.00 17.43
ATOM   10908  CB   GLN   1624       38.012 -19.073  13.415  1.00 20.41
ATOM   10909  CG   GLN   1624       39.205 -18.806  12.499  1.00 28.20
ATOM   10910  CD   GLN   1624       40.540 -18.963  13.210  1.00 31.26
ATOM   10911  OE1  GLN   1624       40.789 -18.329  14.238  1.00 33.11
ATOM   10912  NE2  GLN   1624       41.408 -19.809  12.661  1.00 32.88
ATOM   10913  C    GLN   1624       35.544 -19.296  13.755  1.00 15.38
ATOM   10914  O    GLN   1624       34.966 -20.384  13.757  1.00 15.85
ATOM   10915  N    MET   1625       35.266 -18.334  14.632  1.00 16.26
ATOM   10916  CA   MET   1625       34.249 -18.528  15.664  1.00 14.73
ATOM   10917  CB   MET   1625       34.398 -17.466  16.758  1.00 15.61
ATOM   10918  CG   MET   1625       35.637 -17.671  17.623  1.00 18.12
ATOM   10919  SD   MET   1625       35.862 -16.357  18.837  1.00 20.56
ATOM   10920  CE   MET   1625       34.733 -16.876  20.128  1.00 24.48
ATOM   10921  C    MET   1625       32.832 -18.534  15.104  1.00 15.23
ATOM   10922  O    MET   1625       31.976 -19.288  15.571  1.00 15.05
ATOM   10923  N    LEU   1626       32.572 -17.702  14.101  1.00 16.96
ATOM   10924  CA   LEU   1626       31.240 -17.694  13.504  1.00 15.20
ATOM   10925  CB   LEU   1626       31.139 -16.617  12.416  1.00 15.28
ATOM   10926  CG   LEU   1626       30.816 -15.209  12.916  1.00 12.23
ATOM   10927  CD1  LEU   1626       30.993 -14.196  11.790  1.00 12.86
ATOM   10928  CD2  LEU   1626       29.398 -15.188  13.455  1.00 11.50
ATOM   10929  C    LEU   1626       30.947 -19.065  12.900  1.00 16.67
ATOM   10930  O    LEU   1626       29.905 -19.679  13.161  1.00 16.01
ATOM   10931  N    THR   1627       31.887 -19.548  12.098  1.00 16.42
ATOM   10932  CA   THR   1627       31.743 -20.833  11.423  1.00 19.44
ATOM   10933  CB   THR   1627       33.000 -21.152  10.592  1.00 20.87
ATOM   10934  OG1  THR   1627       33.259 -20.061   9.698  1.00 22.73
ATOM   10935  CG2  THR   1627       32.790 -22.424   9.770  1.00 26.46
ATOM   10936  C    THR   1627       31.481 -21.983  12.382  1.00 18.98
ATOM   10937  O    THR   1627       30.573 -22.782  12.168  1.00 20.35
ATOM   10938  N    GLU   1628       32.267 -22.072  13.446  1.00 20.15
ATOM   10939  CA   GLU   1628       32.053 -23.160  14.378  1.00 21.96
ATOM   10940  CB   GLU   1628       33.257 -23.296  15.313  1.00 25.32
ATOM   10941  CG   GLU   1628       33.231 -22.418  16.525  1.00 28.20
ATOM   10942  CD   GLU   1628       34.458 -22.615  17.394  1.00 27.97
ATOM   10943  OE1  GLU   1628       34.989 -23.748  17.440  1.00 27.80
ATOM   10944  OE2  GLU   1628       34.884 -21.638  18.039  1.00 28.14
ATOM   10945  C    GLU   1628       30.737 -22.990  15.155  1.00 21.32
ATOM   10946  O    GLU   1628       30.278 -23.924  15.807  1.00 21.40
ATOM   10947  N    ARG   1629       30.127 -21.806  15.073  1.00 18.90
ATOM   10948  CA   ARG   1629       28.850 -21.555  15.739  1.00 18.94
ATOM   10949  CB   ARG   1629       28.877 -20.193  16.455  1.00 19.15
ATOM   10950  CG   ARG   1629       29.636 -20.242  17.778  1.00 15.98
ATOM   10951  CD   ARG   1629       30.159 -18.882  18.246  1.00 12.70
ATOM   10952  NE   ARG   1629       30.954 -19.047  19.460  1.00 13.17
ATOM   10953  CZ   ARG   1629       32.154 -19.616  19.498  1.00 12.49
ATOM   10954  NH1  ARG   1629       32.719 -20.068  18.382  1.00 14.22
ATOM   10955  NH2  ARG   1629       32.778 -19.774  20.658  1.00 15.37
ATOM   10956  C    ARG   1629       27.659 -21.633  14.768  1.00 19.42
ATOM   10957  O    ARG   1629       26.610 -21.029  15.006  1.00 21.03
ATOM   10958  N    ALA   1630       27.838 -22.373  13.671  1.00 19.16
ATOM   10959  CA   ALA   1630       26.792 -22.591  12.663  1.00 17.42
ATOM   10960  CB   ALA   1630       25.493 -23.018  13.346  1.00 15.89
ATOM   10961  C    ALA   1630       26.503 -21.444  11.698  1.00 16.92
ATOM   10962  O    ALA   1630       25.460 -21.433  11.052  1.00 15.55
```

```
ATOM   10963  N    VAL  1631      27.412 -20.484  11.590  1.00 16.60
ATOM   10964  CA   VAL  1631      27.194 -19.369  10.685  1.00 15.88
ATOM   10965  CB   VAL  1631      27.282 -18.019  11.436  1.00 17.04
ATOM   10966  CG1  VAL  1631      26.996 -16.863  10.477  1.00 15.90
ATOM   10967  CG2  VAL  1631      26.280 -17.994  12.590  1.00 18.38
ATOM   10968  C    VAL  1631      28.200 -19.357   9.534  1.00 15.71
ATOM   10969  O    VAL  1631      29.375 -19.046   9.728  1.00 17.57
ATOM   10970  N    PRO  1632      27.760 -19.725   8.318  1.00 16.10
ATOM   10971  CD   PRO  1632      26.468 -20.292   7.901  1.00 14.50
ATOM   10972  CA   PRO  1632      28.710 -19.706   7.200  1.00 15.24
ATOM   10973  CB   PRO  1632      27.961 -20.438   6.083  1.00 15.98
ATOM   10974  CG   PRO  1632      26.552 -20.188   6.393  1.00 20.78
ATOM   10975  C    PRO  1632      29.025 -18.255   6.857  1.00 16.57
ATOM   10976  O    PRO  1632      28.156 -17.380   6.933  1.00 15.01
ATOM   10977  N    VAL  1633      30.269 -18.003   6.478  1.00 14.68
ATOM   10978  CA   VAL  1633      30.703 -16.654   6.174  1.00 14.60
ATOM   10979  CB   VAL  1633      31.808 -16.213   7.157  1.00 16.39
ATOM   10980  CG1  VAL  1633      32.210 -14.773   6.874  1.00 16.35
ATOM   10981  CG2  VAL  1633      31.320 -16.371   8.593  1.00 15.41
ATOM   10982  C    VAL  1633      31.237 -16.462   4.770  1.00 14.92
ATOM   10983  O    VAL  1633      31.952 -17.311   4.234  1.00 14.86
ATOM   10984  N    CYS  1634      30.875 -15.332   4.180  1.00 13.16
ATOM   10985  CA   CYS  1634      31.352 -14.972   2.855  1.00 15.22
ATOM   10986  CB   CYS  1634      30.186 -14.545   1.955  1.00 14.14
ATOM   10987  SG   CYS  1634      30.713 -13.922   0.336  1.00 17.65
ATOM   10988  C    CYS  1634      32.277 -13.794   3.132  1.00 14.44
ATOM   10989  O    CYS  1634      31.929 -12.892   3.887  1.00 15.27
ATOM   10990  N    GLY  1635      33.471 -13.816   2.558  1.00 15.52
ATOM   10991  CA   GLY  1635      34.400 -12.723   2.779  1.00 14.14
ATOM   10992  C    GLY  1635      34.162 -11.615   1.771  1.00 15.47
ATOM   10993  O    GLY  1635      33.352 -11.776   0.866  1.00 16.16
ATOM   10994  N    HIS  1636      34.867 -10.498   1.918  1.00 16.26
ATOM   10995  CA   HIS  1636      34.709  -9.364   1.009  1.00 18.95
ATOM   10996  CB   HIS  1636      33.468  -8.553   1.413  1.00 19.60
ATOM   10997  CG   HIS  1636      33.099  -7.460   0.456  1.00 20.41
ATOM   10998  CD2  HIS  1636      33.752  -6.934  -0.607  1.00 20.13
ATOM   10999  ND1  HIS  1636      31.917  -6.757   0.561  1.00 20.81
ATOM   11000  CE1  HIS  1636      31.858  -5.847  -0.393  1.00 20.55
ATOM   11001  NE2  HIS  1636      32.960  -5.933  -1.116  1.00 20.46
ATOM   11002  C    HIS  1636      35.959  -8.491   1.073  1.00 21.06
ATOM   11003  O    HIS  1636      36.171  -7.769   2.050  1.00 23.03
ATOM   11004  N    LEU  1637      36.783  -8.571   0.030  1.00 22.97
ATOM   11005  CA   LEU  1637      38.028  -7.804  -0.050  1.00 24.89
ATOM   11006  CB   LEU  1637      39.227  -8.755  -0.153  1.00 24.90
ATOM   11007  CG   LEU  1637      39.479  -9.659   1.057  1.00 26.13
ATOM   11008  CD1  LEU  1637      40.618 -10.621   0.773  1.00 24.93
ATOM   11009  CD2  LEU  1637      39.804  -8.798   2.267  1.00 26.07
ATOM   11010  C    LEU  1637      38.026  -6.854  -1.243  1.00 26.65
ATOM   11011  O    LEU  1637      37.199  -6.978  -2.147  1.00 24.18
ATOM   11012  N    GLY  1638      38.962  -5.909  -1.234  1.00 28.25
ATOM   11013  CA   GLY  1638      39.063  -4.941  -2.309  1.00 28.56
ATOM   11014  C    GLY  1638      38.402  -3.634  -1.928  1.00 29.01
ATOM   11015  O    GLY  1638      38.664  -3.081  -0.858  1.00 29.30
ATOM   11016  N    LEU  1639      37.537  -3.141  -2.805  1.00 28.17
ATOM   11017  CA   LEU  1639      36.824  -1.898  -2.566  1.00 27.72
ATOM   11018  CB   LEU  1639      36.311  -1.348  -3.899  1.00 29.18
ATOM   11019  CG   LEU  1639      36.026   0.153  -3.987  1.00 30.77
ATOM   11020  CD1  LEU  1639      35.697   0.527  -5.427  1.00 31.76
ATOM   11021  CD2  LEU  1639      34.890   0.522  -3.066  1.00 30.98
ATOM   11022  C    LEU  1639      35.657  -2.190  -1.620  1.00 28.43
ATOM   11023  O    LEU  1639      34.575  -2.581  -2.063  1.00 26.50
ATOM   11024  N    THR  1640      35.890  -2.013  -0.320  1.00 28.20
ATOM   11025  CA   THR  1640      34.866  -2.259   0.698  1.00 28.91
ATOM   11026  CB   THR  1640      35.482  -2.866   1.970  1.00 29.17
ATOM   11027  OG1  THR  1640      36.517  -2.006   2.462  1.00 30.62
ATOM   11028  CG2  THR  1640      36.068  -4.236   1.670  1.00 30.17
ATOM   11029  C    THR  1640      34.171  -0.951   1.057  1.00 28.17
ATOM   11030  O    THR  1640      34.667  -0.177   1.874  1.00 29.15
ATOM   11031  N    PRO  1641      32.991  -0.706   0.463  1.00 27.49
ATOM   11032  CD   PRO  1641      32.251  -1.695  -0.339  1.00 27.96
ATOM   11033  CA   PRO  1641      32.189   0.502   0.674  1.00 26.18
ATOM   11034  CB   PRO  1641      30.897   0.202  -0.092  1.00 26.35
ATOM   11035  CG   PRO  1641      30.832  -1.290  -0.098  1.00 29.35
ATOM   11036  C    PRO  1641      31.952   0.977   2.104  1.00 25.02
ATOM   11037  O    PRO  1641      31.763   2.174   2.332  1.00 24.64
ATOM   11038  N    GLN  1642      31.968   0.064   3.070  1.00 23.18
ATOM   11039  CA   GLN  1642      31.768   0.475   4.459  1.00 23.68
```

```
ATOM   11040  CB   GLN  1642     31.661  -0.751   5.369  1.00 24.34
ATOM   11041  CG   GLN  1642     30.249  -1.307   5.471  1.00 22.71
ATOM   11042  CD   GLN  1642     30.192  -2.633   6.204  1.00 25.04
ATOM   11043  OE1  GLN  1642     31.017  -2.910   7.075  1.00 23.03
ATOM   11044  NE2  GLN  1642     29.204  -3.456   5.865  1.00 23.95
ATOM   11045  C    GLN  1642     32.922   1.367   4.911  1.00 24.23
ATOM   11046  O    GLN  1642     32.781   2.160   5.842  1.00 24.32
ATOM   11047  N    SER  1643     34.061   1.235   4.237  1.00 23.66
ATOM   11048  CA   SER  1643     35.246   2.028   4.559  1.00 24.17
ATOM   11049  CB   SER  1643     36.478   1.126   4.596  1.00 23.24
ATOM   11050  OG   SER  1643     36.342   0.116   5.570  1.00 21.44
ATOM   11051  C    SER  1643     35.474   3.157   3.556  1.00 25.48
ATOM   11052  O    SER  1643     36.602   3.618   3.368  1.00 24.46
ATOM   11053  N    VAL  1644     34.400   3.598   2.908  1.00 26.06
ATOM   11054  CA   VAL  1644     34.502   4.671   1.924  1.00 26.14
ATOM   11055  CB   VAL  1644     33.109   5.080   1.402  1.00 25.49
ATOM   11056  CG1  VAL  1644     32.258   5.623   2.541  1.00 26.03
ATOM   11057  CG2  VAL  1644     33.250   6.110   0.293  1.00 25.29
ATOM   11058  C    VAL  1644     35.209   5.905   2.501  1.00 27.56
ATOM   11059  O    VAL  1644     36.063   6.500   1.842  1.00 27.45
ATOM   11060  N    ASN  1645     34.866   6.282   3.732  1.00 27.89
ATOM   11061  CA   ASN  1645     35.480   7.452   4.359  1.00 28.29
ATOM   11062  CB   ASN  1645     34.779   7.776   5.682  1.00 27.21
ATOM   11063  CG   ASN  1645     33.331   8.190   5.486  1.00 25.74
ATOM   11064  OD1  ASN  1645     33.045   9.268   4.967  1.00 22.31
ATOM   11065  ND2  ASN  1645     32.408   7.321   5.888  1.00 25.99
ATOM   11066  C    ASN  1645     36.971   7.241   4.599  1.00 29.33
ATOM   11067  O    ASN  1645     37.735   8.205   4.676  1.00 29.64
ATOM   11068  N    ILE  1646     37.373   5.978   4.715  1.00 30.28
ATOM   11069  CA   ILE  1646     38.773   5.626   4.931  1.00 31.32
ATOM   11070  CB   ILE  1646     38.929   4.153   5.396  1.00 31.95
ATOM   11071  CG2  ILE  1646     40.399   3.752   5.377  1.00 31.20
ATOM   11072  CG1  ILE  1646     38.355   3.977   6.806  1.00 31.77
ATOM   11073  CD1  ILE  1646     39.071   4.789   7.862  1.00 31.01
ATOM   11074  C    ILE  1646     39.562   5.809   3.636  1.00 33.51
ATOM   11075  O    ILE  1646     40.655   6.377   3.644  1.00 34.28
ATOM   11076  N    PHE  1647     39.006   5.324   2.526  1.00 34.55
ATOM   11077  CA   PHE  1647     39.664   5.439   1.225  1.00 35.75
ATOM   11078  CB   PHE  1647     39.083   4.429   0.227  1.00 36.28
ATOM   11079  CG   PHE  1647     39.051   3.014   0.734  1.00 37.21
ATOM   11080  CD1  PHE  1647     40.183   2.435   1.300  1.00 37.15
ATOM   11081  CD2  PHE  1647     37.885   2.257   0.638  1.00 36.77
ATOM   11082  CE1  PHE  1647     40.154   1.120   1.763  1.00 38.58
ATOM   11083  CE2  PHE  1647     37.845   0.943   1.096  1.00 36.69
ATOM   11084  CZ   PHE  1647     38.981   0.373   1.661  1.00 38.01
ATOM   11085  C    PHE  1647     39.512   6.840   0.643  1.00 36.39
ATOM   11086  O    PHE  1647     40.280   7.243  -0.233  1.00 36.05
ATOM   11087  N    GLY  1648     38.518   7.577   1.130  1.00 36.62
ATOM   11088  CA   GLY  1648     38.279   8.919   0.630  1.00 38.30
ATOM   11089  C    GLY  1648     37.421   8.878  -0.622  1.00 40.02
ATOM   11090  O    GLY  1648     37.406   9.822  -1.413  1.00 40.07
ATOM   11091  N    GLY  1649     36.703   7.773  -0.796  1.00 40.99
ATOM   11092  CA   GLY  1649     35.846   7.609  -1.956  1.00 42.04
ATOM   11093  C    GLY  1649     35.898   6.184  -2.477  1.00 42.47
ATOM   11094  O    GLY  1649     36.534   5.324  -1.876  1.00 41.84
ATOM   11095  N    TYR  1650     35.229   5.927  -3.596  1.00 44.57
ATOM   11096  CA   TYR  1650     35.224   4.592  -4.178  1.00 45.61
ATOM   11097  CB   TYR  1650     33.839   4.258  -4.735  1.00 46.67
ATOM   11098  CG   TYR  1650     32.731   4.386  -3.713  1.00 48.02
ATOM   11099  CD1  TYR  1650     32.142   5.623  -3.448  1.00 47.87
ATOM   11100  CE1  TYR  1650     31.142   5.753  -2.487  1.00 48.46
ATOM   11101  CD2  TYR  1650     32.291   3.275  -2.988  1.00 48.35
ATOM   11102  CE2  TYR  1650     31.291   3.394  -2.021  1.00 48.79
ATOM   11103  CZ   TYR  1650     30.722   4.637  -1.777  1.00 48.77
ATOM   11104  OH   TYR  1650     29.735   4.767  -0.827  1.00 48.30
ATOM   11105  C    TYR  1650     36.272   4.498  -5.280  1.00 46.09
ATOM   11106  O    TYR  1650     35.975   4.697  -6.458  1.00 45.93
ATOM   11107  N    LYS  1651     37.503   4.195  -4.881  1.00 46.34
ATOM   11108  CA   LYS  1651     38.614   4.077  -5.815  1.00 46.77
ATOM   11109  CB   LYS  1651     39.805   4.890  -5.306  1.00 47.81
ATOM   11110  CG   LYS  1651     39.467   6.325  -4.935  1.00 49.04
ATOM   11111  CD   LYS  1651     40.686   7.053  -4.385  1.00 50.24
ATOM   11112  CE   LYS  1651     40.343   8.473  -3.962  1.00 51.45
ATOM   11113  NZ   LYS  1651     41.543   9.208  -3.468  1.00 53.01
ATOM   11114  C    LYS  1651     39.026   2.618  -5.982  1.00 46.53
ATOM   11115  O    LYS  1651     38.815   1.797  -5.087  1.00 46.02
ATOM   11116  N    VAL  1652     39.614   2.300  -7.131  1.00 46.03
```

```
ATOM   11117  CA  VAL  1652      40.063   0.941  -7.409  1.00 45.48
ATOM   11118  CB  VAL  1652      40.715   0.838  -8.803  1.00 45.22
ATOM   11119  CG1 VAL  1652      41.216  -0.577  -9.039  1.00 45.09
ATOM   11120  CG2 VAL  1652      39.708   1.228  -9.874  1.00 44.78
ATOM   11121  C   VAL  1652      41.080   0.510  -6.360  1.00 45.62
ATOM   11122  O   VAL  1652      41.910   1.307  -5.921  1.00 44.90
ATOM   11123  N   GLN  1653      41.012  -0.755  -5.963  1.00 45.29
ATOM   11124  CA  GLN  1653      41.917  -1.286  -4.955  1.00 45.81
ATOM   11125  CB  GLN  1653      41.108  -1.795  -3.758  1.00 46.31
ATOM   11126  CG  GLN  1653      41.733  -1.510  -2.405  1.00 47.72
ATOM   11127  CD  GLN  1653      41.812  -0.025  -2.097  1.00 47.56
ATOM   11128  OE1 GLN  1653      40.805   0.683  -2.129  1.00 47.95
ATOM   11129  NE2 GLN  1653      43.011   0.451  -1.790  1.00 49.46
ATOM   11130  C   GLN  1653      42.745  -2.422  -5.549  1.00 45.65
ATOM   11131  O   GLN  1653      42.340  -3.046  -6.529  1.00 45.37
ATOM   11132  N   GLY  1654      43.907  -2.686  -4.957  1.00 45.93
ATOM   11133  CA  GLY  1654      44.758  -3.753  -5.456  1.00 46.97
ATOM   11134  C   GLY  1654      45.912  -3.277  -6.324  1.00 47.53
ATOM   11135  O   GLY  1654      46.917  -3.974  -6.457  1.00 46.50
ATOM   11136  N   ARG  1655      45.763  -2.096  -6.920  1.00 48.61
ATOM   11137  CA  ARG  1655      46.793  -1.511  -7.778  1.00 49.79
ATOM   11138  CB  ARG  1655      46.421  -0.067  -8.141  1.00 50.69
ATOM   11139  CG  ARG  1655      45.152   0.090  -8.980  1.00 51.67
ATOM   11140  CD  ARG  1655      45.449   0.007 -10.469  1.00 52.58
ATOM   11141  NE  ARG  1655      44.245   0.096 -11.297  1.00 52.70
ATOM   11142  CZ  ARG  1655      43.421   1.141 -11.329  1.00 52.20
ATOM   11143  NH1 ARG  1655      43.658   2.205 -10.574  1.00 52.02
ATOM   11144  NH2 ARG  1655      42.360   1.124 -12.125  1.00 51.43
ATOM   11145  C   ARG  1655      48.146  -1.512  -7.071  1.00 50.62
ATOM   11146  O   ARG  1655      48.328  -0.826  -6.065  1.00 50.32
ATOM   11147  N   GLY  1656      49.093  -2.282  -7.597  1.00 51.16
ATOM   11148  CA  GLY  1656      50.410  -2.339  -6.989  1.00 52.70
ATOM   11149  C   GLY  1656      50.786  -3.730  -6.522  1.00 53.14
ATOM   11150  O   GLY  1656      49.959  -4.640  -6.528  1.00 53.30
ATOM   11151  N   ASP  1657      52.041  -3.898  -6.119  1.00 53.65
ATOM   11152  CA  ASP  1657      52.523  -5.190  -5.649  1.00 53.80
ATOM   11153  CB  ASP  1657      54.034  -5.308  -5.870  1.00 55.47
ATOM   11154  CG  ASP  1657      54.406  -5.377  -7.340  1.00 56.62
ATOM   11155  OD1 ASP  1657      53.962  -6.327  -8.022  1.00 56.60
ATOM   11156  OD2 ASP  1657      55.144  -4.484  -7.812  1.00 57.58
ATOM   11157  C   ASP  1657      52.204  -5.392  -4.173  1.00 53.09
ATOM   11158  O   ASP  1657      51.620  -6.404  -3.793  1.00 52.84
ATOM   11159  N   GLU  1658      52.586  -4.424  -3.347  1.00 52.53
ATOM   11160  CA  GLU  1658      52.340  -4.507  -1.912  1.00 52.30
ATOM   11161  CB  GLU  1658      52.820  -3.232  -1.214  1.00 53.11
ATOM   11162  CG  GLU  1658      52.733  -3.294   0.306  1.00 54.62
ATOM   11163  CD  GLU  1658      53.180  -2.007   0.973  1.00 55.75
ATOM   11164  OE1 GLU  1658      54.319  -1.562   0.708  1.00 56.22
ATOM   11165  OE2 GLU  1658      52.393  -1.443   1.768  1.00 55.93
ATOM   11166  C   GLU  1658      50.859  -4.722  -1.616  1.00 51.14
ATOM   11167  O   GLU  1658      50.491  -5.640  -0.882  1.00 50.90
ATOM   11168  N   ALA  1659      50.015  -3.870  -2.190  1.00 49.84
ATOM   11169  CA  ALA  1659      48.573  -3.969  -1.990  1.00 47.95
ATOM   11170  CB  ALA  1659      47.869  -2.804  -2.675  1.00 48.45
ATOM   11171  C   ALA  1659      48.048  -5.293  -2.535  1.00 46.33
ATOM   11172  O   ALA  1659      47.280  -5.987  -1.869  1.00 46.58
ATOM   11173  N   GLY  1660      48.470  -5.635  -3.748  1.00 44.15
ATOM   11174  CA  GLY  1660      48.035  -6.874  -4.363  1.00 41.45
ATOM   11175  C   GLY  1660      48.372  -8.095  -3.529  1.00 40.33
ATOM   11176  O   GLY  1660      47.507  -8.925  -3.260  1.00 38.67
ATOM   11177  N   ASP  1661      49.630  -8.209  -3.114  1.00 39.99
ATOM   11178  CA  ASP  1661      50.055  -9.348  -2.312  1.00 39.26
ATOM   11179  CB  ASP  1661      51.563  -9.293  -2.058  1.00 42.10
ATOM   11180  CG  ASP  1661      52.368  -9.258  -3.340  1.00 42.83
ATOM   11181  OD1 ASP  1661      52.150 -10.129  -4.208  1.00 42.87
ATOM   11182  OD2 ASP  1661      53.223  -8.360  -3.477  1.00 45.93
ATOM   11183  C   ASP  1661      49.317  -9.386  -0.982  1.00 38.30
ATOM   11184  O   ASP  1661      49.029 -10.460  -0.455  1.00 36.90
ATOM   11185  N   GLN  1662      49.014  -8.211  -0.442  1.00 37.31
ATOM   11186  CA  GLN  1662      48.306  -8.124   0.829  1.00 37.91
ATOM   11187  CB  GLN  1662      48.299  -6.678   1.336  1.00 39.32
ATOM   11188  CG  GLN  1662      47.557  -6.500   2.647  1.00 42.13
ATOM   11189  CD  GLN  1662      47.934  -7.555   3.671  1.00 43.63
ATOM   11190  OE1 GLN  1662      49.108  -7.733   3.993  1.00 44.57
ATOM   11191  NE2 GLN  1662      46.937  -8.261   4.186  1.00 45.08
ATOM   11192  C   GLN  1662      46.872  -8.631   0.694  1.00 36.59
ATOM   11193  O   GLN  1662      46.316  -9.209   1.632  1.00 35.25
```

```
ATOM   11194  N    LEU  1663      46.278  -8.408  -0.474  1.00 36.15
ATOM   11195  CA   LEU  1663      44.911  -8.851  -0.730  1.00 35.64
ATOM   11196  CB   LEU  1663      44.359  -8.190  -1.999  1.00 37.34
ATOM   11197  CG   LEU  1663      44.061  -6.686  -1.919  1.00 39.82
ATOM   11198  CD1  LEU  1663      43.626  -6.168  -3.283  1.00 40.42
ATOM   11199  CD2  LEU  1663      42.971  -6.434  -0.884  1.00 40.78
ATOM   11200  C    LEU  1663      44.880 -10.367  -0.875  1.00 33.87
ATOM   11201  O    LEU  1663      43.997 -11.030  -0.333  1.00 33.09
ATOM   11202  N    LEU  1664      45.850 -10.912  -1.604  1.00 31.69
ATOM   11203  CA   LEU  1664      45.933 -12.353  -1.808  1.00 30.95
ATOM   11204  CB   LEU  1664      47.102 -12.690  -2.736  1.00 34.05
ATOM   11205  CG   LEU  1664      46.949 -13.905  -3.655  1.00 35.86
ATOM   11206  CD1  LEU  1664      48.242 -14.089  -4.444  1.00 37.45
ATOM   11207  CD2  LEU  1664      46.639 -15.155  -2.853  1.00 36.48
ATOM   11208  C    LEU  1664      46.141 -13.026  -0.454  1.00 29.09
ATOM   11209  O    LEU  1664      45.610 -14.107  -0.190  1.00 28.40
ATOM   11210  N    SER  1665      46.921 -12.375   0.403  1.00 26.84
ATOM   11211  CA   SER  1665      47.192 -12.897   1.733  1.00 25.84
ATOM   11212  CB   SER  1665      48.222 -12.017   2.447  1.00 26.63
ATOM   11213  OG   SER  1665      48.565 -12.558   3.713  1.00 28.52
ATOM   11214  C    SER  1665      45.892 -12.931   2.533  1.00 24.57
ATOM   11215  O    SER  1665      45.552 -13.949   3.132  1.00 23.68
ATOM   11216  N    ASP  1666      45.166 -11.815   2.532  1.00 24.47
ATOM   11217  CA   ASP  1666      43.901 -11.738   3.258  1.00 25.90
ATOM   11218  CB   ASP  1666      43.296 -10.328   3.170  1.00 25.16
ATOM   11219  CG   ASP  1666      44.089  -9.296   3.957  1.00 27.13
ATOM   11220  OD1  ASP  1666      44.664  -9.652   5.009  1.00 26.45
ATOM   11221  OD2  ASP  1666      44.130  -8.117   3.534  1.00 27.04
ATOM   11222  C    ASP  1666      42.913 -12.759   2.714  1.00 25.78
ATOM   11223  O    ASP  1666      42.168 -13.382   3.473  1.00 27.18
ATOM   11224  N    ALA  1667      42.910 -12.936   1.397  1.00 25.37
ATOM   11225  CA   ALA  1667      42.013 -13.893   0.765  1.00 24.67
ATOM   11226  CB   ALA  1667      42.187 -13.849  -0.754  1.00 24.78
ATOM   11227  C    ALA  1667      42.297 -15.294   1.287  1.00 24.19
ATOM   11228  O    ALA  1667      41.382 -16.026   1.673  1.00 22.33
ATOM   11229  N    LEU  1668      43.570 -15.673   1.303  1.00 23.07
ATOM   11230  CA   LEU  1668      43.951 -16.996   1.792  1.00 22.47
ATOM   11231  CB   LEU  1668      45.434 -17.256   1.506  1.00 23.09
ATOM   11232  CG   LEU  1668      45.767 -17.598   0.047  1.00 23.46
ATOM   11233  CD1  LEU  1668      47.259 -17.456  -0.188  1.00 24.35
ATOM   11234  CD2  LEU  1668      45.297 -19.006  -0.278  1.00 23.63
ATOM   11235  C    LEU  1668      43.676 -17.140   3.288  1.00 22.33
ATOM   11236  O    LEU  1668      43.296 -18.211   3.751  1.00 22.16
ATOM   11237  N    ALA  1669      43.877 -16.059   4.038  1.00 22.43
ATOM   11238  CA   ALA  1669      43.633 -16.083   5.479  1.00 22.18
ATOM   11239  CB   ALA  1669      44.086 -14.782   6.111  1.00 23.50
ATOM   11240  C    ALA  1669      42.153 -16.328   5.775  1.00 21.87
ATOM   11241  O    ALA  1669      41.809 -17.177   6.600  1.00 22.22
ATOM   11242  N    LEU  1670      41.284 -15.585   5.098  1.00 20.26
ATOM   11243  CA   LEU  1670      39.846 -15.730   5.288  1.00 18.56
ATOM   11244  CB   LEU  1670      39.085 -14.737   4.401  1.00 19.24
ATOM   11245  CG   LEU  1670      39.265 -13.260   4.755  1.00 18.45
ATOM   11246  CD1  LEU  1670      38.703 -12.375   3.662  1.00 19.75
ATOM   11247  CD2  LEU  1670      38.569 -12.973   6.086  1.00 19.43
ATOM   11248  C    LEU  1670      39.405 -17.146   4.962  1.00 19.70
ATOM   11249  O    LEU  1670      38.571 -17.714   5.659  1.00 18.51
ATOM   11250  N    GLU  1671      39.963 -17.720   3.901  1.00 18.99
ATOM   11251  CA   GLU  1671      39.603 -19.079   3.518  1.00 19.04
ATOM   11252  CB   GLU  1671      40.303 -19.474   2.215  1.00 19.59
ATOM   11253  CG   GLU  1671      40.072 -20.929   1.816  1.00 22.01
ATOM   11254  CD   GLU  1671      40.790 -21.305   0.530  1.00 24.31
ATOM   11255  OE1  GLU  1671      42.015 -21.096   0.458  1.00 23.91
ATOM   11256  OE2  GLU  1671      40.128 -21.804  -0.398  1.00 27.07
ATOM   11257  C    GLU  1671      39.978 -20.070   4.616  1.00 18.25
ATOM   11258  O    GLU  1671      39.164 -20.901   5.016  1.00 17.58
ATOM   11259  N    ALA  1672      41.217 -19.985   5.095  1.00 19.38
ATOM   11260  CA   ALA  1672      41.688 -20.879   6.148  1.00 20.20
ATOM   11261  CB   ALA  1672      43.164 -20.623   6.434  1.00 21.78
ATOM   11262  C    ALA  1672      40.870 -20.710   7.429  1.00 21.55
ATOM   11263  O    ALA  1672      40.684 -21.664   8.192  1.00 21.04
ATOM   11264  N    ALA  1673      40.382 -19.492   7.654  1.00 19.63
ATOM   11265  CA   ALA  1673      39.575 -19.175   8.831  1.00 19.73
ATOM   11266  CB   ALA  1673      39.398 -17.665   8.952  1.00 18.51
ATOM   11267  C    ALA  1673      38.212 -19.857   8.782  1.00 20.99
ATOM   11268  O    ALA  1673      37.545 -20.010   9.807  1.00 19.73
ATOM   11269  N    GLY  1674      37.786 -20.248   7.584  1.00 20.06
ATOM   11270  CA   GLY  1674      36.510 -20.928   7.453  1.00 19.89
```

```
ATOM  11271  C    GLY  1674     35.552 -20.324   6.444  1.00 18.97
ATOM  11272  O    GLY  1674     34.468 -20.848   6.245  1.00 18.23
ATOM  11273  N    ALA  1675     35.936 -19.217   5.818  1.00 19.69
ATOM  11274  CA   ALA  1675     35.077 -18.589   4.822  1.00 20.14
ATOM  11275  CB   ALA  1675     35.736 -17.312   4.292  1.00 19.92
ATOM  11276  C    ALA  1675     34.830 -19.582   3.680  1.00 21.06
ATOM  11277  O    ALA  1675     35.772 -20.194   3.175  1.00 22.86
ATOM  11278  N    GLN  1676     33.565 -19.741   3.285  1.00 20.43
ATOM  11279  CA   GLN  1676     33.194 -20.659   2.208  1.00 20.46
ATOM  11280  CB   GLN  1676     31.923 -21.426   2.578  1.00 21.87
ATOM  11281  CG   GLN  1676     32.049 -22.250   3.854  1.00 23.52
ATOM  11282  CD   GLN  1676     30.805 -23.067   4.165  1.00 26.30
ATOM  11283  OE1  GLN  1676     30.470 -24.007   3.449  1.00 30.08
ATOM  11284  NE2  GLN  1676     30.116 -22.707   5.240  1.00 28.15
ATOM  11285  C    GLN  1676     32.982 -19.938   0.879  1.00 19.59
ATOM  11286  O    GLN  1676     32.822 -20.572  -0.163  1.00 20.05
ATOM  11287  N    LEU  1677     32.973 -18.612   0.928  1.00 20.26
ATOM  11288  CA   LEU  1677     32.797 -17.792  -0.257  1.00 20.79
ATOM  11289  CB   LEU  1677     31.314 -17.476  -0.467  1.00 22.99
ATOM  11290  CG   LEU  1677     30.499 -18.528  -1.225  1.00 25.39
ATOM  11291  CD1  LEU  1677     29.007 -18.325  -0.979  1.00 26.62
ATOM  11292  CD2  LEU  1677     30.821 -18.426  -2.711  1.00 25.79
ATOM  11293  C    LEU  1677     33.570 -16.496  -0.092  1.00 21.45
ATOM  11294  O    LEU  1677     33.826 -16.058   1.030  1.00 20.88
ATOM  11295  N    LEU  1678     33.944 -15.881  -1.210  1.00 17.59
ATOM  11296  CA   LEU  1678     34.675 -14.617  -1.168  1.00 20.03
ATOM  11297  CB   LEU  1678     36.189 -14.847  -1.284  1.00 19.25
ATOM  11298  CG   LEU  1678     37.026 -13.574  -1.442  1.00 21.72
ATOM  11299  CD1  LEU  1678     36.892 -12.699  -0.207  1.00 19.17
ATOM  11300  CD2  LEU  1678     38.487 -13.937  -1.671  1.00 20.95
ATOM  11301  C    LEU  1678     34.238 -13.695  -2.288  1.00 19.21
ATOM  11302  O    LEU  1678     34.090 -14.119  -3.432  1.00 20.80
ATOM  11303  N    VAL  1679     34.026 -12.433  -1.947  1.00 19.50
ATOM  11304  CA   VAL  1679     33.639 -11.435  -2.929  1.00 20.39
ATOM  11305  CB   VAL  1679     32.395 -10.630  -2.476  1.00 18.97
ATOM  11306  CG1  VAL  1679     32.202  -9.423  -3.389  1.00 19.05
ATOM  11307  CG2  VAL  1679     31.145 -11.517  -2.518  1.00 17.14
ATOM  11308  C    VAL  1679     34.799 -10.462  -3.121  1.00 22.00
ATOM  11309  O    VAL  1679     35.351  -9.935  -2.145  1.00 20.40
ATOM  11310  N    LEU  1680     35.174 -10.249  -4.380  1.00 22.33
ATOM  11311  CA   LEU  1680     36.250  -9.325  -4.745  1.00 24.09
ATOM  11312  CB   LEU  1680     37.267 -10.011  -5.666  1.00 25.86
ATOM  11313  CG   LEU  1680     38.561 -10.510  -5.030  1.00 28.75
ATOM  11314  CD1  LEU  1680     39.434 -11.167  -6.092  1.00 28.15
ATOM  11315  CD2  LEU  1680     39.295  -9.338  -4.388  1.00 28.06
ATOM  11316  C    LEU  1680     35.631  -8.147  -5.483  1.00 23.79
ATOM  11317  O    LEU  1680     34.984  -8.338  -6.508  1.00 26.35
ATOM  11318  N    GLU  1681     35.829  -6.934  -4.976  1.00 23.88
ATOM  11319  CA   GLU  1681     35.252  -5.753  -5.613  1.00 26.33
ATOM  11320  CB   GLU  1681     34.293  -5.065  -4.636  1.00 23.82
ATOM  11321  CG   GLU  1681     33.793  -3.695  -5.074  1.00 25.12
ATOM  11322  CD   GLU  1681     32.590  -3.233  -4.264  1.00 25.80
ATOM  11323  OE1  GLU  1681     32.420  -3.717  -3.125  1.00 26.14
ATOM  11324  OE2  GLU  1681     31.820  -2.386  -4.760  1.00 27.76
ATOM  11325  C    GLU  1681     36.272  -4.742  -6.137  1.00 27.77
ATOM  11326  O    GLU  1681     37.181  -4.327  -5.417  1.00 28.68
ATOM  11327  N    CYS  1682     36.107  -4.354  -7.399  1.00 29.09
ATOM  11328  CA   CYS  1682     36.982  -3.378  -8.045  1.00 30.51
ATOM  11329  CB   CYS  1682     36.562  -1.968  -7.639  1.00 30.60
ATOM  11330  SG   CYS  1682     34.887  -1.555  -8.174  1.00 32.38
ATOM  11331  C    CYS  1682     38.463  -3.582  -7.760  1.00 31.19
ATOM  11332  O    CYS  1682     39.075  -2.841  -6.984  1.00 32.08
ATOM  11333  N    VAL  1683     39.029  -4.593  -8.405  1.00 31.35
ATOM  11334  CA   VAL  1683     40.436  -4.922  -8.248  1.00 32.78
ATOM  11335  CB   VAL  1683     40.600  -6.146  -7.312  1.00 33.52
ATOM  11336  CG1  VAL  1683     40.443  -7.443  -8.094  1.00 33.50
ATOM  11337  CG2  VAL  1683     41.927  -6.085  -6.596  1.00 34.74
ATOM  11338  C    VAL  1683     40.971  -5.249  -9.645  1.00 33.45
ATOM  11339  O    VAL  1683     40.218  -5.684 -10.516  1.00 33.44
ATOM  11340  N    PRO  1684     42.274  -5.024  -9.887  1.00 33.91
ATOM  11341  CD   PRO  1684     43.339  -4.567  -8.979  1.00 33.50
ATOM  11342  CA   PRO  1684     42.817  -5.330 -11.216  1.00 33.77
ATOM  11343  CB   PRO  1684     44.307  -5.011 -11.066  1.00 34.17
ATOM  11344  CG   PRO  1684     44.558  -5.205  -9.598  1.00 34.44
ATOM  11345  C    PRO  1684     42.557  -6.783 -11.595  1.00 33.67
ATOM  11346  O    PRO  1684     42.807  -7.693 -10.806  1.00 33.93
ATOM  11347  N    VAL  1685     42.043  -6.987 -12.802  1.00 33.35
```

```
ATOM  11348  CA  VAL  1685    41.731  -8.321 -13.301  1.00 33.55
ATOM  11349  CB  VAL  1685    41.535  -8.305 -14.827  1.00 33.86
ATOM  11350  CG1 VAL  1685    40.993  -9.650 -15.296  1.00 33.59
ATOM  11351  CG2 VAL  1685    40.601  -7.175 -15.216  1.00 32.41
ATOM  11352  C   VAL  1685    42.817  -9.343 -12.976  1.00 34.90
ATOM  11353  O   VAL  1685    42.529 -10.426 -12.463  1.00 33.21
ATOM  11354  N   GLU  1686    44.065  -8.994 -13.278  1.00 36.15
ATOM  11355  CA  GLU  1686    45.185  -9.893 -13.024  1.00 37.45
ATOM  11356  CB  GLU  1686    46.512  -9.245 -13.449  1.00 40.77
ATOM  11357  CG  GLU  1686    46.516  -7.719 -13.470  1.00 45.35
ATOM  11358  CD  GLU  1686    45.716  -7.144 -14.631  1.00 47.26
ATOM  11359  OE1 GLU  1686    45.988  -7.521 -15.793  1.00 48.37
ATOM  11360  OE2 GLU  1686    44.820  -6.310 -14.383  1.00 49.33
ATOM  11361  C   GLU  1686    45.259 -10.326 -11.565  1.00 35.59
ATOM  11362  O   GLU  1686    45.636 -11.460 -11.269  1.00 35.39
ATOM  11363  N   LEU  1687    44.896  -9.427 -10.656  1.00 34.93
ATOM  11364  CA  LEU  1687    44.926  -9.743  -9.234  1.00 34.56
ATOM  11365  CB  LEU  1687    44.773  -8.473  -8.400  1.00 36.48
ATOM  11366  CG  LEU  1687    45.413  -8.477  -7.007  1.00 38.23
ATOM  11367  CD1 LEU  1687    45.086  -7.168  -6.311  1.00 39.44
ATOM  11368  CD2 LEU  1687    44.909  -9.646  -6.189  1.00 40.16
ATOM  11369  C   LEU  1687    43.783 -10.706  -8.934  1.00 33.56
ATOM  11370  O   LEU  1687    43.940 -11.656  -8.166  1.00 33.33
ATOM  11371  N   ALA  1688    42.633 -10.455  -9.552  1.00 33.02
ATOM  11372  CA  ALA  1688    41.462 -11.303  -9.374  1.00 32.03
ATOM  11373  CB  ALA  1688    40.285 -10.748 -10.174  1.00 31.82
ATOM  11374  C   ALA  1688    41.798 -12.713  -9.841  1.00 31.88
ATOM  11375  O   ALA  1688    41.306 -13.698  -9.288  1.00 30.38
ATOM  11376  N   LYS  1689    42.642 -12.799 -10.865  1.00 32.10
ATOM  11377  CA  LYS  1689    43.065 -14.080 -11.420  1.00 32.59
ATOM  11378  CB  LYS  1689    43.921 -13.852 -12.667  1.00 35.33
ATOM  11379  CG  LYS  1689    43.301 -12.915 -13.688  1.00 39.20
ATOM  11380  CD  LYS  1689    44.230 -12.702 -14.875  1.00 43.71
ATOM  11381  CE  LYS  1689    43.639 -11.725 -15.875  1.00 44.72
ATOM  11382  NZ  LYS  1689    44.550 -11.492 -17.027  1.00 46.98
ATOM  11383  C   LYS  1689    43.877 -14.854 -10.392  1.00 30.77
ATOM  11384  O   LYS  1689    43.635 -16.040 -10.158  1.00 30.60
ATOM  11385  N   ARG  1690    44.850 -14.172  -9.793  1.00 30.36
ATOM  11386  CA  ARG  1690    45.715 -14.773  -8.782  1.00 30.78
ATOM  11387  CB  ARG  1690    46.706 -13.738  -8.236  1.00 32.24
ATOM  11388  CG  ARG  1690    48.153 -13.968  -8.653  1.00 35.21
ATOM  11389  CD  ARG  1690    49.122 -13.194  -7.766  1.00 35.72
ATOM  11390  NE  ARG  1690    48.987 -11.749  -7.919  1.00 38.51
ATOM  11391  CZ  ARG  1690    49.548 -10.854  -7.110  1.00 38.81
ATOM  11392  NH1 ARG  1690    50.285 -11.253  -6.082  1.00 38.33
ATOM  11393  NH2 ARG  1690    49.374  -9.557  -7.331  1.00 38.70
ATOM  11394  C   ARG  1690    44.895 -15.329  -7.627  1.00 29.79
ATOM  11395  O   ARG  1690    45.018 -16.503  -7.271  1.00 29.49
ATOM  11396  N   ILE  1691    44.059 -14.475  -7.044  1.00 29.53
ATOM  11397  CA  ILE  1691    43.223 -14.874  -5.920  1.00 27.99
ATOM  11398  CB  ILE  1691    42.368 -13.687  -5.428  1.00 28.66
ATOM  11399  CG2 ILE  1691    41.431 -14.141  -4.310  1.00 29.07
ATOM  11400  CG1 ILE  1691    43.290 -12.569  -4.939  1.00 27.59
ATOM  11401  CD1 ILE  1691    42.571 -11.367  -4.367  1.00 30.13
ATOM  11402  C   ILE  1691    42.322 -16.053  -6.278  1.00 28.14
ATOM  11403  O   ILE  1691    42.267 -17.044  -5.551  1.00 28.03
ATOM  11404  N   THR  1692    41.635 -15.952  -7.412  1.00 27.85
ATOM  11405  CA  THR  1692    40.743 -17.016  -7.852  1.00 28.15
ATOM  11406  CB  THR  1692    40.089 -16.670  -9.207  1.00 27.92
ATOM  11407  OG1 THR  1692    39.305 -15.477  -9.070  1.00 30.45
ATOM  11408  CG2 THR  1692    39.192 -17.799  -9.672  1.00 24.79
ATOM  11409  C   THR  1692    41.468 -18.352  -7.975  1.00 28.88
ATOM  11410  O   THR  1692    40.967 -19.378  -7.523  1.00 27.96
ATOM  11411  N   GLU  1693    42.649 -18.346  -8.585  1.00 30.86
ATOM  11412  CA  GLU  1693    43.410 -19.582  -8.739  1.00 31.66
ATOM  11413  CB  GLU  1693    44.509 -19.403  -9.788  1.00 34.46
ATOM  11414  CG  GLU  1693    43.985 -19.142 -11.188  1.00 39.25
ATOM  11415  CD  GLU  1693    45.098 -18.913 -12.193  1.00 41.31
ATOM  11416  OE1 GLU  1693    45.841 -17.920 -12.046  1.00 42.03
ATOM  11417  OE2 GLU  1693    45.227 -19.728 -13.133  1.00 44.22
ATOM  11418  C   GLU  1693    44.031 -20.022  -7.417  1.00 31.18
ATOM  11419  O   GLU  1693    44.220 -21.219  -7.180  1.00 32.59
ATOM  11420  N   ALA  1694    44.339 -19.055  -6.556  1.00 29.06
ATOM  11421  CA  ALA  1694    44.954 -19.349  -5.263  1.00 28.83
ATOM  11422  CB  ALA  1694    45.568 -18.077  -4.681  1.00 28.10
ATOM  11423  C   ALA  1694    43.997 -19.975  -4.252  1.00 28.71
ATOM  11424  O   ALA  1694    44.398 -20.833  -3.463  1.00 27.81
```

```
ATOM  11425  N    LEU  1695    42.734 -19.556  -4.273  1.00 28.34
ATOM  11426  CA   LEU  1695    41.750 -20.103  -3.336  1.00 28.55
ATOM  11427  CB   LEU  1695    40.729 -19.035  -2.936  1.00 28.01
ATOM  11428  CG   LEU  1695    41.242 -17.849  -2.121  1.00 30.89
ATOM  11429  CD1  LEU  1695    40.062 -16.980  -1.700  1.00 27.57
ATOM  11430  CD2  LEU  1695    41.989 -18.348  -0.898  1.00 32.34
ATOM  11431  C    LEU  1695    41.002 -21.306  -3.889  1.00 26.44
ATOM  11432  O    LEU  1695    40.848 -21.452  -5.099  1.00 27.20
ATOM  11433  N    ALA  1696    40.541 -22.168  -2.991  1.00 24.30
ATOM  11434  CA   ALA  1696    39.790 -23.346  -3.391  1.00 23.55
ATOM  11435  CB   ALA  1696    40.026 -24.479  -2.413  1.00 21.99
ATOM  11436  C    ALA  1696    38.313 -22.983  -3.416  1.00 23.10
ATOM  11437  O    ALA  1696    37.562 -23.440  -4.279  1.00 24.16
ATOM  11438  N    ILE  1697    37.898 -22.155  -2.464  1.00 21.53
ATOM  11439  CA   ILE  1697    36.506 -21.734  -2.391  1.00 20.71
ATOM  11440  CB   ILE  1697    36.211 -20.965  -1.082  1.00 18.95
ATOM  11441  CG2  ILE  1697    36.340 -21.897   0.113  1.00 17.11
ATOM  11442  CG1  ILE  1697    37.158 -19.776  -0.955  1.00 18.41
ATOM  11443  CD1  ILE  1697    36.776 -18.806   0.147  1.00 20.97
ATOM  11444  C    ILE  1697    36.185 -20.823  -3.571  1.00 20.34
ATOM  11445  O    ILE  1697    37.073 -20.206  -4.155  1.00 20.05
ATOM  11446  N    PRO  1698    34.903 -20.739  -3.948  1.00 21.40
ATOM  11447  CD   PRO  1698    33.767 -21.568  -3.513  1.00 20.73
ATOM  11448  CA   PRO  1698    34.541 -19.878  -5.074  1.00 20.26
ATOM  11449  CB   PRO  1698    33.102 -20.302  -5.393  1.00 21.48
ATOM  11450  CG   PRO  1698    32.594 -20.847  -4.113  1.00 22.95
ATOM  11451  C    PRO  1698    34.689 -18.390  -4.769  1.00 20.91
ATOM  11452  O    PRO  1698    34.431 -17.932  -3.650  1.00 19.65
ATOM  11453  N    VAL  1699    35.138 -17.648  -5.770  1.00 18.53
ATOM  11454  CA   VAL  1699    35.337 -16.216  -5.637  1.00 19.92
ATOM  11455  CB   VAL  1699    36.802 -15.840  -5.991  1.00 20.40
ATOM  11456  CG1  VAL  1699    37.002 -14.335  -5.923  1.00 18.70
ATOM  11457  CG2  VAL  1699    37.751 -16.534  -5.028  1.00 18.50
ATOM  11458  C    VAL  1699    34.366 -15.480  -6.560  1.00 21.83
ATOM  11459  O    VAL  1699    34.374 -15.672  -7.779  1.00 22.52
ATOM  11460  N    ILE  1700    33.517 -14.648  -5.967  1.00 22.27
ATOM  11461  CA   ILE  1700    32.534 -13.886  -6.722  1.00 22.16
ATOM  11462  CB   ILE  1700    31.211 -13.759  -5.940  1.00 21.79
ATOM  11463  CG2  ILE  1700    30.243 -12.873  -6.700  1.00 22.27
ATOM  11464  CG1  ILE  1700    30.617 -15.150  -5.709  1.00 22.01
ATOM  11465  CD1  ILE  1700    29.416 -15.157  -4.789  1.00 24.61
ATOM  11466  C    ILE  1700    33.100 -12.504  -6.963  1.00 21.79
ATOM  11467  O    ILE  1700    33.537 -11.828  -6.030  1.00 21.47
ATOM  11468  N    GLY  1701    33.096 -12.079  -8.218  1.00 21.16
ATOM  11469  CA   GLY  1701    33.635 -10.773  -8.526  1.00 20.63
ATOM  11470  C    GLY  1701    32.633  -9.714  -8.929  1.00 21.51
ATOM  11471  O    GLY  1701    31.571 -10.003  -9.467  1.00 22.89
ATOM  11472  N    ILE  1702    32.990  -8.470  -8.642  1.00 24.15
ATOM  11473  CA   ILE  1702    32.184  -7.309  -8.988  1.00 25.08
ATOM  11474  CB   ILE  1702    31.275  -6.866  -7.804  1.00 25.11
ATOM  11475  CG2  ILE  1702    32.059  -6.838  -6.504  1.00 24.79
ATOM  11476  CG1  ILE  1702    30.679  -5.490  -8.083  1.00 28.41
ATOM  11477  CD1  ILE  1702    29.632  -5.485  -9.157  1.00 30.16
ATOM  11478  C    ILE  1702    33.209  -6.228  -9.321  1.00 25.61
ATOM  11479  O    ILE  1702    33.728  -5.553  -8.437  1.00 25.75
ATOM  11480  N    GLY  1703    33.515  -6.084 -10.608  1.00 27.06
ATOM  11481  CA   GLY  1703    34.501  -5.105 -11.017  1.00 24.09
ATOM  11482  C    GLY  1703    35.884  -5.717 -10.904  1.00 25.54
ATOM  11483  O    GLY  1703    36.873  -5.017 -10.680  1.00 27.11
ATOM  11484  N    ALA  1704    35.945  -7.037 -11.054  1.00 24.77
ATOM  11485  CA   ALA  1704    37.204  -7.767 -10.970  1.00 26.19
ATOM  11486  CB   ALA  1704    37.187  -8.691  -9.757  1.00 24.95
ATOM  11487  C    ALA  1704    37.454  -8.582 -12.238  1.00 26.93
ATOM  11488  O    ALA  1704    38.294  -9.482 -12.250  1.00 27.02
ATOM  11489  N    GLY  1705    36.725  -8.266 -13.303  1.00 27.42
ATOM  11490  CA   GLY  1705    36.895  -8.993 -14.545  1.00 27.32
ATOM  11491  C    GLY  1705    36.120 -10.297 -14.548  1.00 27.69
ATOM  11492  O    GLY  1705    35.490 -10.653 -13.551  1.00 28.16
ATOM  11493  N    ASN  1706    36.170 -11.017 -15.666  1.00 26.41
ATOM  11494  CA   ASN  1706    35.452 -12.279 -15.801  1.00 26.15
ATOM  11495  CB   ASN  1706    34.909 -12.423 -17.230  1.00 28.81
ATOM  11496  CG   ASN  1706    36.007 -12.410 -18.283  1.00 30.05
ATOM  11497  OD1  ASN  1706    35.750 -12.663 -19.462  1.00 32.36
ATOM  11498  ND2  ASN  1706    37.231 -12.111 -17.866  1.00 27.42
ATOM  11499  C    ASN  1706    36.306 -13.492 -15.452  1.00 27.06
ATOM  11500  O    ASN  1706    36.005 -14.609 -15.874  1.00 28.09
ATOM  11501  N    VAL  1707    37.358 -13.268 -14.669  1.00 25.49
```

```
ATOM   11502  CA  VAL  1707      38.270 -14.335 -14.258  1.00 27.59
ATOM   11503  CB  VAL  1707      39.700 -13.780 -14.047  1.00 29.11
ATOM   11504  CG1 VAL  1707      40.656 -14.914 -13.711  1.00 33.83
ATOM   11505  CG2 VAL  1707      40.169 -13.053 -15.299  1.00 30.80
ATOM   11506  C   VAL  1707      37.815 -15.016 -12.967  1.00 26.92
ATOM   11507  O   VAL  1707      38.311 -16.088 -12.612  1.00 26.60
ATOM   11508  N   THR  1708      36.878 -14.389 -12.263  1.00 24.26
ATOM   11509  CA  THR  1708      36.364 -14.948 -11.019  1.00 23.16
ATOM   11510  CB  THR  1708      35.625 -13.867 -10.202  1.00 22.08
ATOM   11511  OG1 THR  1708      34.731 -13.145 -11.059  1.00 20.76
ATOM   11512  CG2 THR  1708      36.620 -12.894  -9.592  1.00 22.51
ATOM   11513  C   THR  1708      35.427 -16.122 -11.300  1.00 23.44
ATOM   11514  O   THR  1708      34.965 -16.304 -12.427  1.00 24.03
ATOM   11515  N   ASP  1709      35.157 -16.921 -10.271  1.00 23.18
ATOM   11516  CA  ASP  1709      34.299 -18.098 -10.398  1.00 24.19
ATOM   11517  CB  ASP  1709      34.425 -18.954  -9.139  1.00 26.39
ATOM   11518  CG  ASP  1709      35.857 -19.362  -8.861  1.00 28.72
ATOM   11519  OD1 ASP  1709      36.395 -20.179  -9.636  1.00 28.85
ATOM   11520  OD2 ASP  1709      36.440 -18.858  -7.876  1.00 27.39
ATOM   11521  C   ASP  1709      32.843 -17.708 -10.608  1.00 24.34
ATOM   11522  O   ASP  1709      32.054 -18.461 -11.182  1.00 23.59
ATOM   11523  N   GLY  1710      32.499 -16.521 -10.127  1.00 22.85
ATOM   11524  CA  GLY  1710      31.143 -16.032 -10.261  1.00 21.26
ATOM   11525  C   GLY  1710      31.131 -14.522 -10.289  1.00 19.07
ATOM   11526  O   GLY  1710      32.168 -13.878 -10.113  1.00 18.22
ATOM   11527  N   GLN  1711      29.949 -13.956 -10.505  1.00 18.74
ATOM   11528  CA  GLN  1711      29.790 -12.510 -10.570  1.00 18.89
ATOM   11529  CB  GLN  1711      29.502 -12.074 -12.007  1.00 18.46
ATOM   11530  CG  GLN  1711      30.592 -12.373 -13.018  1.00 15.95
ATOM   11531  CD  GLN  1711      31.848 -11.589 -12.758  1.00 19.23
ATOM   11532  OE1 GLN  1711      31.796 -10.409 -12.418  1.00 20.10
ATOM   11533  NE2 GLN  1711      32.995 -12.237 -12.930  1.00 21.35
ATOM   11534  C   GLN  1711      28.623 -12.056  -9.712  1.00 19.28
ATOM   11535  O   GLN  1711      27.756 -12.852  -9.359  1.00 18.49
ATOM   11536  N   ILE  1712      28.605 -10.767  -9.401  1.00 21.16
ATOM   11537  CA  ILE  1712      27.522 -10.172  -8.634  1.00 23.23
ATOM   11538  CB  ILE  1712      27.772 -10.262  -7.109  1.00 24.48
ATOM   11539  CG2 ILE  1712      28.930  -9.342  -6.706  1.00 25.08
ATOM   11540  CG1 ILE  1712      26.492  -9.870  -6.365  1.00 25.35
ATOM   11541  CD1 ILE  1712      26.463 -10.280  -4.898  1.00 29.02
ATOM   11542  C   ILE  1712      27.374  -8.710  -9.055  1.00 24.32
ATOM   11543  O   ILE  1712      28.328  -8.085  -9.539  1.00 23.00
ATOM   11544  N   LEU  1713      26.172  -8.169  -8.888  1.00 24.37
ATOM   11545  CA  LEU  1713      25.914  -6.778  -9.249  1.00 27.03
ATOM   11546  CB  LEU  1713      25.837  -6.650 -10.772  1.00 30.07
ATOM   11547  CG  LEU  1713      26.489  -5.428 -11.427  1.00 33.56
ATOM   11548  CD1 LEU  1713      26.318  -5.532 -12.934  1.00 36.19
ATOM   11549  CD2 LEU  1713      25.851  -4.137 -10.908  1.00 36.32
ATOM   11550  C   LEU  1713      24.609  -6.296  -8.620  1.00 26.45
ATOM   11551  O   LEU  1713      23.723  -7.099  -8.338  1.00 23.98
ATOM   11552  N   VAL  1714      24.509  -4.989  -8.386  1.00 25.79
ATOM   11553  CA  VAL  1714      23.299  -4.410  -7.808  1.00 25.33
ATOM   11554  CB  VAL  1714      23.522  -2.943  -7.363  1.00 26.34
ATOM   11555  CG1 VAL  1714      22.245  -2.379  -6.750  1.00 25.51
ATOM   11556  CG2 VAL  1714      24.660  -2.878  -6.351  1.00 27.39
ATOM   11557  C   VAL  1714      22.215  -4.466  -8.886  1.00 24.33
ATOM   11558  O   VAL  1714      22.379  -3.913  -9.978  1.00 21.59
ATOM   11559  N   MET  1715      21.115  -5.146  -8.573  1.00 22.29
ATOM   11560  CA  MET  1715      20.026  -5.302  -9.521  1.00 20.64
ATOM   11561  CB  MET  1715      18.855  -6.059  -8.881  1.00 18.66
ATOM   11562  CG  MET  1715      18.253  -5.362  -7.667  1.00 16.03
ATOM   11563  SD  MET  1715      16.444  -5.523  -7.565  1.00 14.77
ATOM   11564  CE  MET  1715      15.937  -4.242  -8.684  1.00 11.94
ATOM   11565  C   MET  1715      19.519  -3.983 -10.101  1.00 19.82
ATOM   11566  O   MET  1715      19.002  -3.953 -11.213  1.00 21.61
ATOM   11567  N   HIS  1716      19.668  -2.890  -9.364  1.00 19.03
ATOM   11568  CA  HIS  1716      19.192  -1.600  -9.855  1.00 22.19
ATOM   11569  CB  HIS  1716      19.137  -0.596  -8.703  1.00 20.78
ATOM   11570  CG  HIS  1716      18.098  -0.932  -7.675  1.00 21.06
ATOM   11571  CD2 HIS  1716      18.126  -1.784  -6.623  1.00 18.32
ATOM   11572  ND1 HIS  1716      16.826  -0.399  -7.699  1.00 20.68
ATOM   11573  CE1 HIS  1716      16.116  -0.907  -6.707  1.00 18.23
ATOM   11574  NE2 HIS  1716      16.882  -1.750  -6.039  1.00 21.81
ATOM   11575  C   HIS  1716      20.035  -1.067 -11.018  1.00 22.57
ATOM   11576  O   HIS  1716      19.558  -0.273 -11.835  1.00 22.73
ATOM   11577  N   ASP  1717      21.287  -1.504 -11.097  1.00 23.70
ATOM   11578  CA  ASP  1717      22.145  -1.089 -12.199  1.00 26.09
```

```
ATOM  11579  CB  ASP  1717   23.615  -1.081 -11.769  1.00 27.37
ATOM  11580  CG  ASP  1717   23.891  -0.070 -10.672  1.00 27.23
ATOM  11581  OD1 ASP  1717   23.334   1.040 -10.740  1.00 28.27
ATOM  11582  OD2 ASP  1717   24.663  -0.386  -9.748  1.00 27.57
ATOM  11583  C   ASP  1717   21.939  -2.064 -13.353  1.00 27.25
ATOM  11584  O   ASP  1717   22.022  -1.687 -14.522  1.00 26.75
ATOM  11585  N   ALA  1718   21.641  -3.315 -13.013  1.00 26.99
ATOM  11586  CA  ALA  1718   21.424  -4.349 -14.019  1.00 28.53
ATOM  11587  CB  ALA  1718   21.320  -5.716 -13.344  1.00 28.27
ATOM  11588  C   ALA  1718   20.196  -4.099 -14.896  1.00 28.41
ATOM  11589  O   ALA  1718   20.106  -4.644 -15.995  1.00 29.83
ATOM  11590  N   PHE  1719   19.258  -3.278 -14.422  1.00 30.20
ATOM  11591  CA  PHE  1719   18.053  -2.968 -15.197  1.00 29.35
ATOM  11592  CB  PHE  1719   16.797  -3.436 -14.458  1.00 30.92
ATOM  11593  CG  PHE  1719   16.863  -4.866 -14.004  1.00 31.07
ATOM  11594  CD1 PHE  1719   17.299  -5.863 -14.870  1.00 34.00
ATOM  11595  CD2 PHE  1719   16.500  -5.215 -12.708  1.00 33.37
ATOM  11596  CE1 PHE  1719   17.379  -7.187 -14.453  1.00 33.82
ATOM  11597  CE2 PHE  1719   16.574  -6.537 -12.278  1.00 34.22
ATOM  11598  CZ  PHE  1719   17.016  -7.524 -13.155  1.00 35.15
ATOM  11599  C   PHE  1719   17.912  -1.484 -15.533  1.00 30.03
ATOM  11600  O   PHE  1719   16.837  -1.021 -15.919  1.00 29.75
ATOM  11601  N   GLY  1720   18.999  -0.738 -15.391  1.00 30.77
ATOM  11602  CA  GLY  1720   18.955   0.680 -15.699  1.00 29.22
ATOM  11603  C   GLY  1720   17.997   1.486 -14.839  1.00 29.76
ATOM  11604  O   GLY  1720   17.524   2.546 -15.258  1.00 30.07
ATOM  11605  N   ILE  1721   17.701   0.998 -13.638  1.00 25.96
ATOM  11606  CA  ILE  1721   16.806   1.721 -12.743  1.00 25.33
ATOM  11607  CB  ILE  1721   16.312   0.817 -11.572  1.00 21.96
ATOM  11608  CG2 ILE  1721   15.463   1.629 -10.606  1.00 22.06
ATOM  11609  CG1 ILE  1721   15.492  -0.352 -12.118  1.00 23.00
ATOM  11610  CD1 ILE  1721   15.126  -1.395 -11.081  1.00 22.54
ATOM  11611  C   ILE  1721   17.530   2.940 -12.168  1.00 25.41
ATOM  11612  O   ILE  1721   16.960   4.020 -12.089  1.00 25.23
ATOM  11613  N   THR  1722   18.792   2.766 -11.778  1.00 28.45
ATOM  11614  CA  THR  1722   19.563   3.871 -11.206  1.00 31.68
ATOM  11615  CB  THR  1722   20.885   3.387 -10.588  1.00 31.93
ATOM  11616  OG1 THR  1722   21.778   2.969 -11.626  1.00 35.74
ATOM  11617  CG2 THR  1722   20.634   2.227  -9.643  1.00 28.90
ATOM  11618  C   THR  1722   19.895   4.940 -12.243  1.00 34.83
ATOM  11619  O   THR  1722   20.220   4.621 -13.386  1.00 34.13
ATOM  11620  N   GLY  1723   19.811   6.200 -11.816  1.00 38.15
ATOM  11621  CA  GLY  1723   20.100   7.342 -12.667  1.00 44.26
ATOM  11622  C   GLY  1723   20.393   7.053 -14.126  1.00 48.27
ATOM  11623  O   GLY  1723   19.534   6.554 -14.857  1.00 50.07
ATOM  11624  N   GLY  1724   21.612   7.368 -14.554  1.00 50.26
ATOM  11625  CA  GLY  1724   21.990   7.136 -15.936  1.00 52.51
ATOM  11626  C   GLY  1724   23.414   6.641 -16.078  1.00 54.09
ATOM  11627  O   GLY  1724   23.677   5.698 -16.825  1.00 55.33
ATOM  11628  N   HIS  1725   24.338   7.275 -15.363  1.00 55.09
ATOM  11629  CA  HIS  1725   25.742   6.881 -15.429  1.00 56.44
ATOM  11630  CB  HIS  1725   26.648   8.096 -15.214  1.00 58.71
ATOM  11631  CG  HIS  1725   26.616   9.079 -16.342  1.00 61.40
ATOM  11632  CD2 HIS  1725   26.415  10.418 -16.354  1.00 62.22
ATOM  11633  ND1 HIS  1725   26.821   8.711 -17.654  1.00 62.27
ATOM  11634  CE1 HIS  1725   26.748   9.780 -18.426  1.00 63.11
ATOM  11635  NE2 HIS  1725   26.503  10.829 -17.662  1.00 63.16
ATOM  11636  C   HIS  1725   26.097   5.797 -14.419  1.00 55.56
ATOM  11637  O   HIS  1725   26.673   6.078 -13.369  1.00 55.59
ATOM  11638  N   ILE  1726   25.754   4.555 -14.748  1.00 54.42
ATOM  11639  CA  ILE  1726   26.044   3.425 -13.875  1.00 53.21
ATOM  11640  CB  ILE  1726   25.356   2.134 -14.382  1.00 53.76
ATOM  11641  CG2 ILE  1726   23.843   2.277 -14.290  1.00 53.32
ATOM  11642  CG1 ILE  1726   25.788   1.845 -15.822  1.00 54.09
ATOM  11643  CD1 ILE  1726   25.277   0.524 -16.365  1.00 53.89
ATOM  11644  C   ILE  1726   27.554   3.195 -13.821  1.00 51.83
ATOM  11645  O   ILE  1726   28.297   3.700 -14.665  1.00 51.84
ATOM  11646  N   PRO  1727   28.029   2.431 -12.825  1.00 49.69
ATOM  11647  CD  PRO  1727   27.283   1.702 -11.785  1.00 49.25
ATOM  11648  CA  PRO  1727   29.468   2.172 -12.715  1.00 48.30
ATOM  11649  CB  PRO  1727   29.566   1.318 -11.453  1.00 48.75
ATOM  11650  CG  PRO  1727   28.250   0.611 -11.416  1.00 49.22
ATOM  11651  C   PRO  1727   30.040   1.480 -13.953  1.00 46.66
ATOM  11652  O   PRO  1727   29.368   0.669 -14.589  1.00 46.75
ATOM  11653  N   LYS  1728   31.283   1.808 -14.290  1.00 44.70
ATOM  11654  CA  LYS  1728   31.940   1.230 -15.457  1.00 42.31
ATOM  11655  CB  LYS  1728   33.379   1.747 -15.571  1.00 45.34
```

```
ATOM   11656  CG   LYS  1728      33.500    3.186 -16.065  1.00 49.29
ATOM   11657  CD   LYS  1728      32.922    4.188 -15.074  1.00 51.69
ATOM   11658  CE   LYS  1728      33.050    5.614 -15.598  1.00 52.92
ATOM   11659  NZ   LYS  1728      32.499    6.622 -14.646  1.00 54.39
ATOM   11660  C    LYS  1728      31.954   -0.293 -15.470  1.00 38.59
ATOM   11661  O    LYS  1728      31.994   -0.906 -16.536  1.00 37.57
ATOM   11662  N    PHE  1729      31.920   -0.904 -14.292  1.00 34.69
ATOM   11663  CA   PHE  1729      31.947   -2.358 -14.201  1.00 30.76
ATOM   11664  CB   PHE  1729      32.582   -2.782 -12.870  1.00 31.47
ATOM   11665  CG   PHE  1729      31.882   -2.234 -11.657  1.00 31.03
ATOM   11666  CD1  PHE  1729      30.666   -2.765 -11.232  1.00 31.72
ATOM   11667  CD2  PHE  1729      32.445   -1.190 -10.932  1.00 31.83
ATOM   11668  CE1  PHE  1729      30.027   -2.265 -10.099  1.00 30.43
ATOM   11669  CE2  PHE  1729      31.816   -0.684  -9.800  1.00 32.00
ATOM   11670  CZ   PHE  1729      30.604   -1.222  -9.381  1.00 32.08
ATOM   11671  C    PHE  1729      30.571   -2.999 -14.346  1.00 27.80
ATOM   11672  O    PHE  1729      30.460   -4.215 -14.486  1.00 26.63
ATOM   11673  N    ALA  1730      29.526   -2.181 -14.321  1.00 26.96
ATOM   11674  CA   ALA  1730      28.165   -2.694 -14.435  1.00 26.38
ATOM   11675  CB   ALA  1730      27.243   -1.938 -13.486  1.00 25.85
ATOM   11676  C    ALA  1730      27.627   -2.611 -15.852  1.00 26.64
ATOM   11677  O    ALA  1730      28.155   -1.886 -16.694  1.00 27.21
ATOM   11678  N    LYS  1731      26.565   -3.362 -16.112  1.00 25.32
ATOM   11679  CA   LYS  1731      25.951   -3.348 -17.427  1.00 26.32
ATOM   11680  CB   LYS  1731      26.419   -4.550 -18.241  1.00 27.13
ATOM   11681  CG   LYS  1731      25.726   -4.683 -19.587  1.00 29.75
ATOM   11682  CD   LYS  1731      26.304   -5.843 -20.375  1.00 31.89
ATOM   11683  CE   LYS  1731.     25.551   -6.072 -21.667  1.00 32.08
ATOM   11684  NZ   LYS  1731      26.136   -7.215 -22.417  1.00 34.11
ATOM   11685  C    LYS  1731      24.431   -3.361 -17.307  1.00 25.48
ATOM   11686  O    LYS  1731      23.868   -4.094 -16.498  1.00 24.67
ATOM   11687  N    ASN  1732      23.779   -2.534 -18.113  1.00 24.62
ATOM   11688  CA   ASN  1732      22.326   -2.450 -18.112  1.00 24.54
ATOM   11689  CB   ASN  1732      21.883   -1.055 -18.565  1.00 23.33
ATOM   11690  CG   ASN  1732      20.371   -0.911 -18.640  1.00 21.61
ATOM   11691  OD1  ASN  1732      19.637   -1.889 -18.565  1.00 19.03
ATOM   11692  ND2  ASN  1732      19.903    0.326 -18.804  1.00 23.82
ATOM   11693  C    ASN  1732      21.785   -3.508 -19.068  1.00 25.76
ATOM   11694  O    ASN  1732      21.773   -3.302 -20.283  1.00 25.61
ATOM   11695  N    PHE  1733      21.344   -4.637 -18.520  1.00 25.01
ATOM   11696  CA   PHE  1733      20.811   -5.719 -19.337  1.00 25.29
ATOM   11697  CB   PHE  1733      20.880   -7.049 -18.582  1.00 26.19
ATOM   11698  CG   PHE  1733      22.279   -7.524 -18.325  1.00 25.90
ATOM   11699  CD1  PHE  1733      22.973   -7.108 -17.195  1.00 26.87
ATOM   11700  CD2  PHE  1733      22.922   -8.353 -19.237  1.00 26.66
ATOM   11701  CE1  PHE  1733      24.292   -7.510 -16.975  1.00 25.54
ATOM   11702  CE2  PHE  1733      24.242   -8.761 -19.029  1.00 26.56
ATOM   11703  CZ   PHE  1733      24.926   -8.335 -17.895  1.00 27.21
ATOM   11704  C    PHE  1733.     19.380   -5.471 -19.807  1.00 26.55
ATOM   11705  O    PHE  1733.     18.902   -6.133 -20.726  1.00 22.93
ATOM   11706  N    LEU  1734      18.696   -4.521 -19.178  1.00 27.50
ATOM   11707  CA   LEU  1734      17.330   -4.212 -19.569  1.00 29.76
ATOM   11708  CB   LEU  1734      16.605   -3.451 -18.461  1.00 28.65
ATOM   11709  CG   LEU  1734      15.196   -2.972 -18.829  1.00 27.48
ATOM   11710  CD1  LEU  1734      14.348   -4.147 -19.304  1.00 25.62
ATOM   11711  CD2  LEU  1734      14.566   -2.305 -17.625  1.00 23.90
ATOM   11712  C    LEU  1734      17.293   -3.383 -20.847  1.00 32.37
ATOM   11713  O    LEU  1734      16.613   -3.748 -21.804  1.00 31.12
ATOM   11714  N    ALA  1735      18.023   -2.270 -20.855  1.00 36.48
ATOM   11715  CA   ALA  1735      18.068   -1.378 -22.011  1.00 42.29
ATOM   11716  CB   ALA  1735      19.293   -0.470 -21.929  1.00 42.69
ATOM   11717  C    ALA  1735      18.100   -2.186 -23.297  1.00 46.05
ATOM   11718  O    ALA  1735      17.499   -1.801 -24.307  1.00 46.72
ATOM   11719  N    GLU  1736      18.797   -3.317 -23.239  1.00 49.05
ATOM   11720  CA   GLU  1736      18.923   -4.225 -24.374  1.00 51.86
ATOM   11721  CB   GLU  1736      19.548   -5.551 -23.913  1.00 53.55
ATOM   11722  CG   GLU  1736      20.814   -5.411 -23.072  1.00 55.23
ATOM   11723  CD   GLU  1736      22.018   -4.944 -23.873  1.00 57.29
ATOM   11724  OE1  GLU  1736      21.940   -3.866 -24.505  1.00 58.69
ATOM   11725  OE2  GLU  1736      23.046   -5.657 -23.869  1.00 57.04
ATOM   11726  C    GLU  1736      17.546   -4.495 -24.986  1.00 52.19
ATOM   11727  O    GLU  1736      17.355   -4.351 -26.195  1.00 53.04
ATOM   11728  N    THR  1737      16.594   -4.876 -24.134  1.00 51.41
ATOM   11729  CA   THR  1737      15.228   -5.187 -24.551  1.00 49.15
ATOM   11730  CB   THR  1737      14.969   -6.699 -24.442  1.00 50.52
ATOM   11731  OG1  THR  1737      13.658   -7.002 -24.935  1.00 54.05
ATOM   11732  CG2  THR  1737      15.082   -7.146 -22.993  1.00 51.48
```

```
ATOM   11733  C    THR  1737      14.202  -4.449 -23.685  1.00 46.27
ATOM   11734  O    THR  1737      14.491  -3.381 -23.149  1.00 47.44
ATOM   11735  N    GLY  1738      13.004  -5.015 -23.557  1.00 42.24
ATOM   11736  CA   GLY  1738      11.969  -4.397 -22.742  1.00 36.72
ATOM   11737  C    GLY  1738      11.296  -5.412 -21.831  1.00 33.77
ATOM   11738  O    GLY  1738      10.106  -5.314 -21.520  1.00 31.85
ATOM   11739  N    ASP  1739      12.076  -6.395 -21.398  1.00 31.02
ATOM   11740  CA   ASP  1739      11.587  -7.461 -20.535  1.00 29.23
ATOM   11741  CB   ASP  1739      11.418  -8.744 -21.358  1.00 32.58
ATOM   11742  CG   ASP  1739      10.678  -9.832 -20.609  1.00 35.23
ATOM   11743  OD1  ASP  1739      11.103 -10.195 -19.493  1.00 35.59
ATOM   11744  OD2  ASP  1739       9.667 -10.332 -21.147  1.00 38.35
ATOM   11745  C    ASP  1739      12.612  -7.688 -19.425  1.00 26.10
ATOM   11746  O    ASP  1739      13.748  -8.092 -19.691  1.00 24.19
ATOM   11747  N    ILE  1740      12.215  -7.417 -18.184  1.00 23.09
ATOM   11748  CA   ILE  1740      13.111  -7.596 -17.050  1.00 21.06
ATOM   11749  CB   ILE  1740      12.454  -7.102 -15.740  1.00 20.26
ATOM   11750  CG2  ILE  1740      13.307  -7.516 -14.531  1.00 21.30
ATOM   11751  CG1  ILE  1740      12.300  -5.584 -15.794  1.00 20.28
ATOM   11752  CD1  ILE  1740      11.517  -4.983 -14.637  1.00 21.21
ATOM   11753  C    ILE  1740      13.545  -9.049 -16.896  1.00 19.53
ATOM   11754  O    ILE  1740      14.724  -9.337 -16.663  1.00 20.00
ATOM   11755  N    ARG  1741      12.600  -9.971 -17.030  1.00 18.98
ATOM   11756  CA   ARG  1741      12.937 -11.384 -16.911  1.00 19.96
ATOM   11757  CB   ARG  1741      11.668 -12.236 -16.974  1.00 19.87
ATOM   11758  CG   ARG  1741      10.849 -12.142 -15.696  1.00 21.32
ATOM   11759  CD   ARG  1741       9.513 -12.853 -15.810  1.00 23.47
ATOM   11760  NE   ARG  1741       8.776 -12.794 -14.549  1.00 25.80
ATOM   11761  CZ   ARG  1741       8.294 -11.676 -14.013  1.00 27.35
ATOM   11762  NH1  ARG  1741       8.462 -10.514 -14.627  1.00 29.85
ATOM   11763  NH2  ARG  1741       7.651 -11.716 -12.853  1.00 28.28
ATOM   11764  C    ARG  1741      13.936 -11.809 -17.984  1.00 20.67
ATOM   11765  O    ARG  1741      14.888 -12.546 -17.702  1.00 20.44
ATOM   11766  N    ALA  1742      13.733 -11.333 -19.209  1.00 18.88
ATOM   11767  CA   ALA  1742      14.642 -11.663 -20.299  1.00 19.67
ATOM   11768  CB   ALA  1742      14.100 -11.119 -21.617  1.00 17.58
ATOM   11769  C    ALA  1742      16.012 -11.057 -20.002  1.00 19.77
ATOM   11770  O    ALA  1742      17.040 -11.601 -20.391  1.00 21.64
ATOM   11771  N    ALA  1743      16.011  -9.923 -19.308  1.00 19.15
ATOM   11772  CA   ALA  1743      17.245  -9.244 -18.946  1.00 18.94
ATOM   11773  CB   ALA  1743      16.934  -7.880 -18.354  1.00 19.04
ATOM   11774  C    ALA  1743      18.006 -10.095 -17.932  1.00 19.62
ATOM   11775  O    ALA  1743      19.231 -10.194 -17.984  1.00 19.37
ATOM   11776  N    VAL  1744      17.268 -10.706 -17.010  1.00 20.08
ATOM   11777  CA   VAL  1744      17.861 -11.560 -15.992  1.00 19.96
ATOM   11778  CB   VAL  1744      16.791 -12.000 -14.961  1.00 21.45
ATOM   11779  CG1  VAL  1744      17.314 -13.143 -14.099  1.00 19.83
ATOM   11780  CG2  VAL  1744      16.429 -10.812 -14.071  1.00 18.35
ATOM   11781  C    VAL  1744      18.485 -12.783 -16.659  1.00 22.05
ATOM   11782  O    VAL  1744      19.602 -13.197 -16.326  1.00 21.12
ATOM   11783  N    ARG  1745      17.762 -13.356 -17.612  1.00 21.99
ATOM   11784  CA   ARG  1745      18.265 -14.515 -18.333  1.00 24.40
ATOM   11785  CB   ARG  1745      17.191 -15.066 -19.275  1.00 25.74
ATOM   11786  CG   ARG  1745      15.991 -15.664 -18.561  1.00 26.03
ATOM   11787  CD   ARG  1745      15.141 -16.466 -19.527  1.00 29.74
ATOM   11788  NE   ARG  1745      14.575 -15.629 -20.580  1.00 31.09
ATOM   11789  CZ   ARG  1745      13.454 -14.924 -20.456  1.00 33.24
ATOM   11790  NH1  ARG  1745      12.767 -14.957 -19.320  1.00 31.03
ATOM   11791  NH2  ARG  1745      13.024 -14.183 -21.470  1.00 33.72
ATOM   11792  C    ARG  1745      19.523 -14.161 -19.126  1.00 24.45
ATOM   11793  O    ARG  1745      20.420 -14.994 -19.283  1.00 23.74
ATOM   11794  N    GLN  1746      19.598 -12.925 -19.612  1.00 24.53
ATOM   11795  CA   GLN  1746      20.759 -12.490 -20.389  1.00 24.66
ATOM   11796  CB   GLN  1746      20.500 -11.120 -21.022  1.00 24.98
ATOM   11797  CG   GLN  1746      21.506 -10.729 -22.100  1.00 26.46
ATOM   11798  CD   GLN  1746      21.249  -9.339 -22.651  1.00 28.72
ATOM   11799  OE1  GLN  1746      20.132  -9.019 -23.066  1.00 27.11
ATOM   11800  NE2  GLN  1746      22.282  -8.506 -22.662  1.00 30.62
ATOM   11801  C    GLN  1746      21.984 -12.410 -19.491  1.00 24.23
ATOM   11802  O    GLN  1746      23.071 -12.850 -19.860  1.00 23.92
ATOM   11803  N    TYR  1747      21.800 -11.831 -18.311  1.00 23.27
ATOM   11804  CA   TYR  1747      22.883 -11.693 -17.352  1.00 22.18
ATOM   11805  CB   TYR  1747      22.363 -10.949 -16.114  1.00 21.72
ATOM   11806  CG   TYR  1747      23.266 -10.978 -14.901  1.00 20.80
ATOM   11807  CD1  TYR  1747      24.581 -10.525 -14.969  1.00 20.83
ATOM   11808  CE1  TYR  1747      25.406 -10.540 -13.844  1.00 21.19
ATOM   11809  CD2  TYR  1747      22.794 -11.446 -13.677  1.00 20.71
```

```
ATOM   11810  CE2  TYR  1747     23.610 -11.463 -12.546  1.00 21.91
ATOM   11811  CZ   TYR  1747     24.913 -11.011 -12.640  1.00 20.88
ATOM   11812  OH   TYR  1747     25.730 -11.044 -11.530  1.00 22.08
ATOM   11813  C    TYR  1747     23.417 -13.079 -16.987  1.00 21.20
ATOM   11814  O    TYR  1747     24.625 -13.303 -16.992  1.00 21.41
ATOM   11815  N    MET  1748     22.516 -14.010 -16.692  1.00 19.89
ATOM   11816  CA   MET  1748     22.915 -15.370 -16.327  1.00 22.82
ATOM   11817  CB   MET  1748     21.680 -16.205 -15.994  1.00 22.86
ATOM   11818  CG   MET  1748     20.883 -15.673 -14.814  1.00 24.78
ATOM   11819  SD   MET  1748     19.282 -16.477 -14.671  1.00 29.17
ATOM   11820  CE   MET  1748     19.786 -18.014 -13.979  1.00 26.45
ATOM   11821  C    MET  1748     23.692 -16.047 -17.452  1.00 22.62
ATOM   11822  O    MET  1748     24.653 -16.786 -17.213  1.00 21.81
ATOM   11823  N    ALA  1749     23.262 -15.790 -18.680  1.00 22.35
ATOM   11824  CA   ALA  1749     23.900 -16.374 -19.848  1.00 21.37
ATOM   11825  CB   ALA  1749     22.980 -16.228 -21.061  1.00 22.11
ATOM   11826  C    ALA  1749     25.268 -15.766 -20.148  1.00 20.89
ATOM   11827  O    ALA  1749     26.212 -16.489 -20.461  1.00 23.24
ATOM   11828  N    GLU  1750     25.390 -14.446 -20.053  1.00 21.41
ATOM   11829  CA   GLU  1750     26.671 -13.808 -20.352  1.00 21.76
ATOM   11830  CB   GLU  1750     26.497 -12.300 -20.528  1.00 23.39
ATOM   11831  CG   GLU  1750     25.501 -11.917 -21.613  1.00 25.73
ATOM   11832  CD   GLU  1750     25.685 -10.499 -22.093  1.00 25.79
ATOM   11833  OE1  GLU  1750     26.438  -9.746 -21.442  1.00 25.87
ATOM   11834  OE2  GLU  1750     25.070 -10.130 -23.123  1.00 28.21
ATOM   11835  C    GLU  1750     27.749 -14.084 -19.307  1.00 23.50
ATOM   11836  O    GLU  1750     28.942 -14.115 -19.627  1.00 21.76
ATOM   11837  N    VAL  1751     27.345 -14.269 -18.054  1.00 23.02
ATOM   11838  CA   VAL  1751     28.317 -14.558 -17.007  1.00 23.63
ATOM   11839  CB   VAL  1751     27.674 -14.482 -15.593  1.00 23.59
ATOM   11840  CG1  VAL  1751     28.597 -15.124 -14.563  1.00 22.90
ATOM   11841  CG2  VAL  1751     27.431 -13.029 -15.214  1.00 22.54
ATOM   11842  C    VAL  1751     28.893 -15.952 -17.233  1.00 24.14
ATOM   11843  O    VAL  1751     30.100 -16.164 -17.100  1.00 25.38
ATOM   11844  N    GLU  1752     28.028 -16.895 -17.589  1.00 24.05
ATOM   11845  CA   GLU  1752     28.459 -18.264 -17.834  1.00 26.81
ATOM   11846  CB   GLU  1752     27.247 -19.196 -17.907  1.00 28.09
ATOM   11847  CG   GLU  1752     27.611 -20.655 -18.151  1.00 30.83
ATOM   11848  CD   GLU  1752     26.452 -21.589 -17.904  1.00 30.97
ATOM   11849  OE1  GLU  1752     26.551 -22.775 -18.279  1.00 32.52
ATOM   11850  OE2  GLU  1752     25.439 -21.143 -17.328  1.00 31.48
ATOM   11851  C    GLU  1752     29.284 -18.397 -19.113  1.00 28.55
ATOM   11852  O    GLU  1752     30.237 -19.173 -19.164  1.00 29.30
ATOM   11853  N    SER  1753     28.914 -17.646 -20.146  1.00 28.43
ATOM   11854  CA   SER  1753     29.640 -17.701 -21.413  1.00 29.68
ATOM   11855  CB   SER  1753     28.832 -17.023 -22.521  1.00 30.24
ATOM   11856  OG   SER  1753     27.577 -17.653 -22.696  1.00 36.50
ATOM   11857  C    SER  1753     30.988 -17.008 -21.283  1.00 30.05
ATOM   11858  O    SER  1753     31.950 -17.366 -21.961  1.00 29.58
ATOM   11859  N    GLY  1754     31.047 -16.013 -20.404  1.00 28.51
ATOM   11860  CA   GLY  1754     32.276 -15.269 -20.213  1.00 27.36
ATOM   11861  C    GLY  1754     32.203 -13.911 -20.888  1.00 26.65
ATOM   11862  O    GLY  1754     33.136 -13.113 -20.801  1.00 26.59
ATOM   11863  N    VAL  1755     31.085 -13.644 -21.556  1.00 25.85
ATOM   11864  CA   VAL  1755     30.885 -12.379 -22.252  1.00 26.68
ATOM   11865  CB   VAL  1755     29.604 -12.421 -23.099  1.00 28.95
ATOM   11866  CG1  VAL  1755     29.419 -11.106 -23.840  1.00 29.75
ATOM   11867  CG2  VAL  1755     29.686 -13.578 -24.081  1.00 31.72
ATOM   11868  C    VAL  1755     30.807 -11.205 -21.286  1.00 26.82
ATOM   11869  O    VAL  1755     31.157 -10.073 -21.636  1.00 25.55
ATOM   11870  N    TYR  1756     30.346 -11.480 -20.068  1.00 25.63
ATOM   11871  CA   TYR  1756     30.233 -10.455 -19.031  1.00 25.13
ATOM   11872  CB   TYR  1756     28.764 -10.150 -18.707  1.00 25.56
ATOM   11873  CG   TYR  1756     28.618  -9.068 -17.657  1.00 24.46
ATOM   11874  CD1  TYR  1756     28.867  -7.734 -17.974  1.00 24.19
ATOM   11875  CE1  TYR  1756     28.852  -6.745 -16.998  1.00 25.87
ATOM   11876  CD2  TYR  1756     28.336  -9.388 -16.327  1.00 24.07
ATOM   11877  CE2  TYR  1756     28.319  -8.406 -15.338  1.00 24.15
ATOM   11878  CZ   TYR  1756     28.583  -7.086 -15.679  1.00 24.77
ATOM   11879  OH   TYR  1756     28.632  -6.112 -14.706  1.00 24.55
ATOM   11880  C    TYR  1756     30.931 -10.927 -17.761  1.00 25.03
ATOM   11881  O    TYR  1756     30.743 -12.059 -17.329  1.00 22.60
ATOM   11882  N    PRO  1757     31.748 -10.056 -17.145  1.00 27.09
ATOM   11883  CD   PRO  1757     32.331 -10.263 -15.807  1.00 26.60
ATOM   11884  CA   PRO  1757     32.016  -8.698 -17.622  1.00 28.05
ATOM   11885  CB   PRO  1757     32.530  -7.995 -16.370  1.00 29.31
ATOM   11886  CG   PRO  1757     33.281  -9.082 -15.679  1.00 29.30
```

```
ATOM   11887  C    PRO  1757      33.031  -8.664 -18.761  1.00 30.41
ATOM   11888  O    PRO  1757      33.900  -9.529 -18.855  1.00 30.25
ATOM   11889  N    GLY  1758      32.911  -7.663 -19.627  1.00 31.45
ATOM   11890  CA   GLY  1758      33.839  -7.537 -20.735  1.00 32.26
ATOM   11891  C    GLY  1758      35.007  -6.657 -20.339  1.00 33.47
ATOM   11892  O    GLY  1758      35.073  -6.183 -19.202  1.00 30.45
ATOM   11893  N    GLU  1759      35.932  -6.427 -21.265  1.00 34.20
ATOM   11894  CA   GLU  1759      37.088  -5.589 -20.966  1.00 36.05
ATOM   11895  CB   GLU  1759      38.020  -5.500 -22.179  1.00 37.61
ATOM   11896  CG   GLU  1759      39.230  -4.611 -21.932  1.00 39.60
ATOM   11897  CD   GLU  1759      40.075  -5.093 -20.765  1.00 40.84
ATOM   11898  OE1  GLU  1759      40.868  -4.288 -20.231  1.00 43.08
ATOM   11899  OE2  GLU  1759      39.949  -6.278 -20.390  1.00 40.65
ATOM   11900  C    GLU  1759      36.665  -4.181 -20.550  1.00 36.19
ATOM   11901  O    GLU  1759      37.293  -3.560 -19.693  1.00 36.76
ATOM   11902  N    GLU  1760      35.596  -3.683 -21.162  1.00 37.70
ATOM   11903  CA   GLU  1760      35.095  -2.347 -20.863  1.00 38.57
ATOM   11904  CB   GLU  1760      33.950  -1.980 -21.809  1.00 41.14
ATOM   11905  CG   GLU  1760      34.038  -2.619 -23.182  1.00 43.82
ATOM   11906  CD   GLU  1760      33.669  -4.089 -23.154  1.00 44.67
ATOM   11907  OE1  GLU  1760      32.538  -4.404 -22.730  1.00 45.33
ATOM   11908  OE2  GLU  1760      34.508  -4.925 -23.556  1.00 45.49
ATOM   11909  C    GLU  1760      34.598  -2.255 -19.426  1.00 37.43
ATOM   11910  O    GLU  1760      34.479  -1.162 -18.873  1.00 37.27
ATOM   11911  N    HIS  1761      34.306  -3.411 -18.835  1.00 36.62
ATOM   11912  CA   HIS  1761      33.809  -3.487 -17.462  1.00 36.41
ATOM   11913  CB   HIS  1761      32.650  -4.485 -17.373  1.00 34.33
ATOM   11914  CG   HIS  1761      31.541  -4.218 -18.343  1.00 33.22
ATOM   11915  CD2  HIS  1761      31.033  -4.973 -19.346  1.00 31.29
ATOM   11916  ND1  HIS  1761      30.806  -3.053 -18.329  1.00 32.96
ATOM   11917  CE1  HIS  1761      29.892  -3.101 -19.281  1.00 32.22
ATOM   11918  NE2  HIS  1761      30.008  -4.255 -19.912  1.00 32.69
ATOM   11919  C    HIS  1761      34.905  -3.941 -16.504  1.00 37.42
ATOM   11920  O    HIS  1761      34.620  -4.320 -15.369  1.00 38.41
ATOM   11921  N    SER  1762      36.153  -3.898 -16.960  1.00 37.25
ATOM   11922  CA   SER  1762      37.276  -4.338 -16.144  1.00 37.81
ATOM   11923  CB   SER  1762      37.960  -5.527 -16.819  1.00 37.82
ATOM   11924  OG   SER  1762      37.022  -6.539 -17.142  1.00 36.90
ATOM   11925  C    SER  1762      38.309  -3.245 -15.884  1.00 39.62
ATOM   11926  O    SER  1762      38.410  -2.277 -16.642  1.00 37.84
ATOM   11927  N    PHE  1763      39.069  -3.402 -14.802  1.00 40.54
ATOM   11928  CA   PHE  1763      40.112  -2.441 -14.458  1.00 43.38
ATOM   11929  CB   PHE  1763      39.929  -1.897 -13.037  1.00 44.18
ATOM   11930  CG   PHE  1763      38.661  -1.112 -12.840  1.00 45.64
ATOM   11931  CD1  PHE  1763      37.477  -1.752 -12.485  1.00 46.71
ATOM   11932  CD2  PHE  1763      38.648   0.269 -13.014  1.00 46.22
ATOM   11933  CE1  PHE  1763      36.297  -1.028 -12.305  1.00 46.58
ATOM   11934  CE2  PHE  1763      37.475   1.004 -12.838  1.00 46.28
ATOM   11935  CZ   PHE  1763      36.297   0.353 -12.482  1.00 46.49
ATOM   11936  C    PHE  1763      41.475  -3.110 -14.567  1.00 45.31
ATOM   11937  O    PHE  1763      41.568  -4.325 -14.742  1.00 45.15
ATOM   11938  N    HIS  1764      42.531  -2.309 -14.464  1.00 47.11
ATOM   11939  CA   HIS  1764      43.897  -2.814 -14.551  1.00 48.73
ATOM   11940  CB   HIS  1764      44.368  -2.804 -16.007  1.00 48.11
ATOM   11941  CG   HIS  1764      43.714  -3.847 -16.858  1.00 47.92
ATOM   11942  CD2  HIS  1764      42.833  -3.742 -17.881  1.00 47.14
ATOM   11943  ND1  HIS  1764      43.935  -5.196 -16.681  1.00 48.69
ATOM   11944  CE1  HIS  1764      43.218  -5.877 -17.557  1.00 47.18
ATOM   11945  NE2  HIS  1764      42.541  -5.018 -18.297  1.00 46.67
ATOM   11946  C    HIS  1764      44.848  -1.989 -13.694  1.00 49.73
ATOM   11947  O    HIS  1764      45.534  -2.589 -12.839  1.00 50.49
ATOM   11948  OXT  HIS  1764      44.896  -0.757 -13.887  1.00 51.77
ATOM   11949  C1   KPL  1765      27.748  -4.209  -4.469  1.00 37.13
ATOM   11950  C2   KPL  1765      27.949  -5.559  -3.746  1.00 36.67
ATOM   11951  C3   KPL  1765      27.104  -6.630  -4.447  1.00 36.77
ATOM   11952  C4   KPL  1765      29.432  -5.968  -3.834  1.00 38.31
ATOM   11953  O1   KPL  1765      30.255  -4.985  -3.190  1.00 40.50
ATOM   11954  C5   KPL  1765      27.511  -5.432  -2.265  1.00 36.08
ATOM   11955  O2   KPL  1765      28.306  -5.650  -1.372  1.00 36.16
ATOM   11956  C6   KPL  1765      26.106  -5.037  -1.885  1.00 33.38
ATOM   11957  O3   KPL  1765      25.273  -4.814  -2.736  1.00 35.07
ATOM   11958  O4   KPL  1765      25.770  -4.927  -0.590  1.00 32.90
ATOM   11959  CB   MET  1801      10.432 -42.440  39.264  1.00 62.99
ATOM   11960  CG   MET  1801      11.787 -41.787  39.475  1.00 64.83
ATOM   11961  SD   MET  1801      12.950 -42.846  40.338  1.00 67.79
ATOM   11962  CE   MET  1801      12.685 -42.311  42.031  1.00 67.34
ATOM   11963  C    MET  1801       8.891 -40.780  40.307  1.00 59.13
```

```
ATOM  11964  O    MET  1801       7.710 -40.737  40.655  1.00 59.38
ATOM  11965  N    MET  1801       9.705 -40.456  37.968  1.00 61.53
ATOM  11966  CA   MET  1801       9.294 -41.449  38.998  1.00 60.88
ATOM  11967  N    LYS  1802       9.874 -40.256  41.033  1.00 56.22
ATOM  11968  CA   LYS  1802       9.599 -39.612  42.312  1.00 53.19
ATOM  11969  CB   LYS  1802       9.801 -40.624  43.447  1.00 54.60
ATOM  11970  CG   LYS  1802       9.046 -41.941  43.283  1.00 55.72
ATOM  11971  CD   LYS  1802       7.557 -41.813  43.598  1.00 56.31
ATOM  11972  CE   LYS  1802       7.306 -41.678  45.099  1.00 56.54
ATOM  11973  NZ   LYS  1802       5.851 -41.687  45.436  1.00 55.62
ATOM  11974  C    LYS  1802      10.437 -38.361  42.596  1.00 49.88
ATOM  11975  O    LYS  1802      10.760 -38.088  43.759  1.00 50.44
ATOM  11976  N    PRO  1803      10.811 -37.590  41.560  1.00 45.52
ATOM  11977  CD   PRO  1803      11.320 -36.225  41.816  1.00 44.97
ATOM  11978  CA   PRO  1803      10.530 -37.761  40.132  1.00 41.04
ATOM  11979  CB   PRO  1803      10.376 -36.334  39.651  1.00 42.80
ATOM  11980  CG   PRO  1803      11.465 -35.650  40.414  1.00 43.86
ATOM  11981  C    PRO  1803      11.674 -38.481  39.414  1.00 36.05
ATOM  11982  O    PRO  1803      12.591 -38.991  40.056  1.00 34.80
ATOM  11983  N    THR  1804      11.621 -38.511  38.084  1.00 30.62
ATOM  11984  CA   THR  1804      12.666 -39.155  37.283  1.00 26.97
ATOM  11985  CB   THR  1804      12.172 -39.435  35.853  1.00 25.88
ATOM  11986  OG1  THR  1804      11.046 -40.323  35.902  1.00 24.56
ATOM  11987  CG2  THR  1804      13.276 -40.073  35.021  1.00 22.12
ATOM  11988  C    THR  1804      13.880 -38.232  37.215  1.00 24.43
ATOM  11989  O    THR  1804      13.752 -37.056  36.888  1.00 22.49
ATOM  11990  N    THR  1805      15.055 -38.769  37.524  1.00 23.84
ATOM  11991  CA   THR  1805      16.278 -37.973  37.516  1.00 22.21
ATOM  11992  CB   THR  1805      16.829 -37.800  38.940  1.00 23.39
ATOM  11993  OG1  THR  1805      17.286 -39.072  39.423  1.00 25.01
ATOM  11994  CG2  THR  1805      15.756 -37.267  39.866  1.00 23.36
ATOM  11995  C    THR  1805      17.379 -38.614  36.682  1.00 21.44
ATOM  11996  O    THR  1805      17.268 -39.761  36.247  1.00 19.91
ATOM  11997  N    ILE  1806      18.453 -37.863  36.471  1.00 19.22
ATOM  11998  CA   ILE  1806      19.574 -38.376  35.706  1.00 20.35
ATOM  11999  CB   ILE  1806      20.696 -37.329  35.599  1.00 22.61
ATOM  12000  CG2  ILE  1806      21.806 -37.846  34.689  1.00 23.50
ATOM  12001  CG1  ILE  1806      20.133 -36.030  35.016  1.00 24.71
ATOM  12002  CD1  ILE  1806      21.079 -34.859  35.129  1.00 27.86
ATOM  12003  C    ILE  1806      20.108 -39.623  36.415  1.00 19.98
ATOM  12004  O    ILE  1806      20.612 -40.551  35.780  1.00 17.26
ATOM  12005  N    SER  1807      19.979 -39.652  37.736  1.00 19.88
ATOM  12006  CA   SER  1807      20.455 -40.796  38.505  1.00 20.30
ATOM  12007  CB   SER  1807      20.201 -40.578  40.000  1.00 22.82
ATOM  12008  OG   SER  1807      20.872 -39.418  40.459  1.00 29.05
ATOM  12009  C    SER  1807      19.777 -42.090  38.062  1.00 19.29
ATOM  12010  O    SER  1807      20.408 -43.148  38.010  1.00 18.78
ATOM  12011  N    LEU  1808      18.491 -42.002  37.741  1.00 19.36
ATOM  12012  CA   LEU  1808      17.731 -43.170  37.317  1.00 19.70
ATOM  12013  CB   LEU  1808      16.248 -42.828  37.204  1.00 21.62
ATOM  12014  CG   LEU  1808      15.233 -43.791  37.821  1.00 26.64
ATOM  12015  CD1  LEU  1808      13.896 -43.565  37.130  1.00 27.41
ATOM  12016  CD2  LEU  1808      15.658 -45.247  37.649  1.00 26.23
ATOM  12017  C    LEU  1808      18.218 -43.719  35.984  1.00 17.67
ATOM  12018  O    LEU  1808      18.294 -44.934  35.797  1.00 16.92
ATOM  12019  N    LEU  1809      18.528 -42.831  35.047  1.00 16.05
ATOM  12020  CA   LEU  1809      19.006 -43.273  33.740  1.00 15.75
ATOM  12021  CB   LEU  1809      19.110 -42.089  32.772  1.00 13.68
ATOM  12022  CG   LEU  1809      17.811 -41.302  32.527  1.00 16.26
ATOM  12023  CD1  LEU  1809      18.026 -40.320  31.380  1.00 11.13
ATOM  12024  CD2  LEU  1809      16.672 -42.238  32.202  1.00 15.56
ATOM  12025  C    LEU  1809      20.363 -43.936  33.900  1.00 16.76
ATOM  12026  O    LEU  1809      20.643 -44.952  33.267  1.00 17.33
ATOM  12027  N    GLN  1810      21.207 -43.363  34.752  1.00 18.12
ATOM  12028  CA   GLN  1810      22.526 -43.943  34.978  1.00 19.74
ATOM  12029  CB   GLN  1810      23.325 -43.078  35.957  1.00 22.02
ATOM  12030  CG   GLN  1810      24.818 -43.410  36.021  1.00 24.70
ATOM  12031  CD   GLN  1810      25.527 -43.270  34.676  1.00 24.85
ATOM  12032  OE1  GLN  1810      25.549 -44.197  33.869  1.00 26.62
ATOM  12033  NE2  GLN  1810      26.100 -42.101  34.430  1.00 25.00
ATOM  12034  C    GLN  1810      22.345 -45.363  35.520  1.00 20.60
ATOM  12035  O    GLN  1810      23.081 -46.275  35.142  1.00 19.97
ATOM  12036  N    LYS  1811      21.356 -45.553  36.391  1.00 20.73
ATOM  12037  CA   LYS  1811      21.088 -46.881  36.952  1.00 22.94
ATOM  12038  CB   LYS  1811      19.960 -46.825  37.989  1.00 25.60
ATOM  12039  CG   LYS  1811      19.688 -48.183  38.647  1.00 30.12
ATOM  12040  CD   LYS  1811      18.259 -48.325  39.172  1.00 34.97
```

```
ATOM   12041   CE    LYS   1811      17.969  -47.428   40.368   1.00 37.63
ATOM   12042   NZ    LYS   1811      16.572  -47.640   40.868   1.00 38.97
ATOM   12043   C     LYS   1811      20.677  -47.820   35.822   1.00 22.37
ATOM   12044   O     LYS   1811      21.130  -48.965   35.750   1.00 23.23
ATOM   12045   N     TYR   1812      19.803  -47.327   34.948   1.00 20.19
ATOM   12046   CA    TYR   1812      19.328  -48.108   33.806   1.00 19.41
ATOM   12047   CB    TYR   1812      18.394  -47.252   32.939   1.00 20.86
ATOM   12048   CG    TYR   1812      17.008  -47.048   33.529   1.00 23.68
ATOM   12049   CD1   TYR   1812      16.100  -46.165   32.941   1.00 25.01
ATOM   12050   CE1   TYR   1812      14.810  -46.011   33.456   1.00 28.32
ATOM   12051   CD2   TYR   1812      16.590  -47.769   34.650   1.00 25.69
ATOM   12052   CE2   TYR   1812      15.307  -47.623   35.169   1.00 26.94
ATOM   12053   CZ    TYR   1812      14.424  -46.748   34.568   1.00 27.83
ATOM   12054   OH    TYR   1812      13.147  -46.626   35.067   1.00 33.55
ATOM   12055   C     TYR   1812      20.488  -48.620   32.960   1.00 19.49
ATOM   12056   O     TYR   1812      20.478  -49.768   32.508   1.00 18.51
ATOM   12057   N     LYS   1813      21.486  -47.768   32.739   1.00 18.22
ATOM   12058   CA    LYS   1813      22.641  -48.177   31.950   1.00 18.58
ATOM   12059   CB    LYS   1813      23.577  -46.993   31.679   1.00 17.18
ATOM   12060   CG    LYS   1813      24.847  -47.399   30.924   1.00 14.61
ATOM   12061   CD    LYS   1813      25.545  -46.214   30.288   1.00 14.45
ATOM   12062   CE    LYS   1813      26.783  -46.661   29.524   1.00 13.10
ATOM   12063   NZ    LYS   1813      26.884  -45.976   28.193   1.00 12.51
ATOM   12064   C     LYS   1813      23.398  -49.284   32.688   1.00 19.88
ATOM   12065   O     LYS   1813      23.840  -50.247   32.076   1.00 19.85
ATOM   12066   N     GLN   1814      23.541  -49.144   34.001   1.00 23.03
ATOM   12067   CA    GLN   1814      24.238  -50.156   34.785   1.00 26.55
ATOM   12068   CB    GLN   1814      24.399  -49.695   36.229   1.00 30.23
ATOM   12069   CG    GLN   1814      25.271  -48.461   36.380   1.00 36.91
ATOM   12070   CD    GLN   1814      25.444  -48.052   37.827   1.00 40.35
ATOM   12071   OE1   GLN   1814      25.895  -48.843   38.655   1.00 43.65
ATOM   12072   NE2   GLN   1814      25.087  -46.811   38.142   1.00 43.19
ATOM   12073   C     GLN   1814      23.481  -51.480   34.745   1.00 26.92
ATOM   12074   O     GLN   1814      24.086  -52.553   34.697   1.00 29.93
ATOM   12075   N     GLU   1815      22.155  -51.402   34.756   1.00 26.78
ATOM   12076   CA    GLU   1815      21.313  -52.595   34.720   1.00 26.97
ATOM   12077   CB    GLU   1815      19.947  -52.290   35.342   1.00 29.31
ATOM   12078   CG    GLU   1815      20.023  -51.678   36.735   1.00 35.92
ATOM   12079   CD    GLU   1815      18.652  -51.375   37.325   1.00 38.20
ATOM   12080   OE1   GLU   1815      17.878  -50.624   36.694   1.00 40.52
ATOM   12081   OE2   GLU   1815      18.352  -51.886   38.424   1.00 42.17
ATOM   12082   C     GLU   1815      21.118  -53.075   33.285   1.00 24.86
ATOM   12083   O     GLU   1815      20.503  -54.113   33.048   1.00 24.50
ATOM   12084   N     LYS   1816      21.651  -52.318   32.331   1.00 23.60
ATOM   12085   CA    LYS   1816      21.516  -52.653   30.920   1.00 24.10
ATOM   12086   CB    LYS   1816      22.168  -54.012   30.619   1.00 27.06
ATOM   12087   CG    LYS   1816      23.690  -53.956   30.494   1.00 29.88
ATOM   12088   CD    LYS   1816      24.106  -53.130   29.280   1.00 33.12
ATOM   12089   CE    LYS   1816      25.622  -52.924   29.206   1.00 34.77
ATOM   12090   NZ    LYS   1816      26.378  -54.205   29.060   1.00 36.10
ATOM   12091   C     LYS   1816      20.048  -52.658   30.491   1.00 23.58
ATOM   12092   O     LYS   1816      19.635  -53.456   29.650   1.00 22.90
ATOM   12093   N     LYS   1817      19.258  -51.763   31.081   1.00 22.10
ATOM   12094   CA    LYS   1817      17.847  -51.649   30.730   1.00 19.64
ATOM   12095   CB    LYS   1817      16.982  -51.432   31.973   1.00 23.35
ATOM   12096   CG    LYS   1817      15.498  -51.274   31.636   1.00 26.44
ATOM   12097   CD    LYS   1817      14.682  -50.726   32.801   1.00 30.23
ATOM   12098   CE    LYS   1817      14.649  -51.683   33.980   1.00 33.21
ATOM   12099   NZ    LYS   1817      13.841  -51.115   35.101   1.00 36.99
ATOM   12100   C     LYS   1817      17.655  -50.463   29.790   1.00 19.22
ATOM   12101   O     LYS   1817      17.761  -49.311   30.212   1.00 15.14
ATOM   12102   N     ARG   1818      17.373  -50.756   28.523   1.00 17.56
ATOM   12103   CA    ARG   1818      17.165  -49.723   27.515   1.00 17.68
ATOM   12104   CB    ARG   1818      17.122  -50.354   26.121   1.00 17.01
ATOM   12105   CG    ARG   1818      18.516  -50.558   25.563   1.00 20.64
ATOM   12106   CD    ARG   1818      18.534  -51.433   24.331   1.00 26.16
ATOM   12107   NE    ARG   1818      18.303  -52.836   24.671   1.00 27.97
ATOM   12108   CZ    ARG   1818      18.504  -53.847   23.833   1.00 30.30
ATOM   12109   NH1   ARG   1818      18.942  -53.611   22.602   1.00 31.08
ATOM   12110   NH2   ARG   1818      18.266  -55.091   24.223   1.00 30.79
ATOM   12111   C     ARG   1818      15.898  -48.939   27.800   1.00 16.78
ATOM   12112   O     ARG   1818      14.858  -49.522   28.107   1.00 17.29
ATOM   12113   N     PHE   1819      15.986  -47.615   27.695   1.00 15.71
ATOM   12114   CA    PHE   1819      14.849  -46.764   28.005   1.00 13.45
ATOM   12115   CB    PHE   1819      15.167  -45.940   29.258   1.00 12.38
ATOM   12116   CG    PHE   1819      16.395  -45.082   29.135   1.00 10.54
ATOM   12117   CD1   PHE   1819      16.302  -43.780   28.653   1.00 10.46
```

```
ATOM   12118  CD2 PHE  1819     17.648 -45.576  29.494  1.00 11.28
ATOM   12119  CE1 PHE  1819     17.434 -42.980  28.540  1.00 10.02
ATOM   12120  CE2 PHE  1819     18.790 -44.782  29.384  1.00 12.19
ATOM   12121  CZ  PHE  1819     18.684 -43.484  28.903  1.00 10.00
ATOM   12122  C   PHE  1819     14.405 -45.848  26.877  1.00 12.26
ATOM   12123  O   PHE  1819     15.214 -45.404  26.057  1.00 11.06
ATOM   12124  N   ALA  1820     13.105 -45.572  26.850  1.00 11.30
ATOM   12125  CA  ALA  1820     12.525 -44.715  25.833  1.00 11.83
ATOM   12126  CB  ALA  1820     11.114 -45.203  25.470  1.00 10.93
ATOM   12127  C   ALA  1820     12.464 -43.256  26.262  1.00 11.52
ATOM   12128  O   ALA  1820     12.287 -42.945  27.441  1.00 13.43
ATOM   12129  N   THR  1821     12.598 -42.372  25.277  1.00 11.00
ATOM   12130  CA  THR  1821     12.552 -40.928  25.481  1.00 11.82
ATOM   12131  CB  THR  1821     13.973 -40.321  25.403  1.00 11.47
ATOM   12132  OG1 THR  1821     14.756 -40.809  26.505  1.00 15.36
ATOM   12133  CG2 THR  1821     13.913 -38.816  25.451  1.00 23.24
ATOM   12134  C   THR  1821     11.706 -40.398  24.331  1.00  9.33
ATOM   12135  O   THR  1821     11.554 -41.075  23.312  1.00 12.52
ATOM   12136  N   ILE  1822     11.150 -39.201  24.465  1.00 10.58
ATOM   12137  CA  ILE  1822     10.315 -38.690  23.385  1.00  9.32
ATOM   12138  CB  ILE  1822      8.892 -39.296  23.504  1.00 10.75
ATOM   12139  CG2 ILE  1822      8.162 -38.672  24.716  1.00 10.54
ATOM   12140  CG1 ILE  1822      8.102 -39.050  22.222  1.00 13.24
ATOM   12141  CD1 ILE  1822      6.801 -39.836  22.165  1.00 14.23
ATOM   12142  C   ILE  1822     10.237 -37.169  23.415  1.00 12.04
ATOM   12143  O   ILE  1822     10.473 -36.552  24.456  1.00  9.11
ATOM   12144  N   THR  1823      9.926 -36.565  22.269  1.00 10.88
ATOM   12145  CA  THR  1823      9.778 -35.119  22.212  1.00 12.73
ATOM   12146  CB  THR  1823      9.990 -34.570  20.766  1.00 11.54
ATOM   12147  OG1 THR  1823      9.000 -35.126  19.889  1.00 12.04
ATOM   12148  CG2 THR  1823     11.393 -34.936  20.259  1.00 14.24
ATOM   12149  C   THR  1823      8.359 -34.785  22.681  1.00 12.09
ATOM   12150  O   THR  1823      7.436 -35.591  22.546  1.00 11.41
ATOM   12151  N   ALA  1824      8.203 -33.599  23.257  1.00 10.84
ATOM   12152  CA  ALA  1824      6.912 -33.134  23.756  1.00 10.40
ATOM   12153  CB  ALA  1824      6.659 -33.673  25.173  1.00  9.05
ATOM   12154  C   ALA  1824      6.973 -31.604  23.776  1.00 10.44
ATOM   12155  O   ALA  1824      8.015 -31.023  24.087  1.00  9.73
ATOM   12156  N   TYR  1825      5.867 -30.947  23.445  1.00  9.09
ATOM   12157  CA  TYR  1825      5.864 -29.483  23.405  1.00 10.72
ATOM   12158  CB  TYR  1825      6.002 -28.995  21.960  1.00  9.65
ATOM   12159  CG  TYR  1825      7.028 -29.745  21.159  1.00 10.96
ATOM   12160  CD1 TYR  1825      6.640 -30.696  20.226  1.00 13.24
ATOM   12161  CE1 TYR  1825      7.578 -31.379  19.466  1.00 13.61
ATOM   12162  CD2 TYR  1825      8.389 -29.496  21.323  1.00 11.25
ATOM   12163  CE2 TYR  1825      9.341 -30.180  20.569  1.00 10.63
ATOM   12164  CZ  TYR  1825      8.919 -31.116  19.642  1.00 12.50
ATOM   12165  OH  TYR  1825      9.842 -31.782  18.876  1.00 13.92
ATOM   12166  C   TYR  1825      4.614 -28.854  23.994  1.00 11.54
ATOM   12167  O   TYR  1825      4.427 -27.642  23.906  1.00 12.75
ATOM   12168  N   ASP  1826      3.755 -29.666  24.592  1.00  9.86
ATOM   12169  CA  ASP  1826      2.532 -29.141  25.170  1.00 12.59
ATOM   12170  CB  ASP  1826      1.454 -29.020  24.084  1.00 10.93
ATOM   12171  CG  ASP  1826      1.095 -30.362  23.471  1.00 13.46
ATOM   12172  OD1 ASP  1826      0.357 -31.125  24.116  1.00 12.97
ATOM   12173  OD2 ASP  1826      1.569 -30.656  22.356  1.00 14.57
ATOM   12174  C   ASP  1826      2.038 -30.007  26.325  1.00 11.01
ATOM   12175  O   ASP  1826      2.516 -31.120  26.549  1.00 12.69
ATOM   12176  N   TYR  1827      1.077 -29.469  27.060  1.00 11.39
ATOM   12177  CA  TYR  1827      0.497 -30.145  28.212  1.00 11.45
ATOM   12178  CB  TYR  1827     -0.513 -29.212  28.879  1.00 12.27
ATOM   12179  CG  TYR  1827     -1.358 -29.886  29.937  1.00 12.69
ATOM   12180  CD1 TYR  1827     -0.912 -29.990  31.255  1.00 14.43
ATOM   12181  CE1 TYR  1827     -1.696 -30.593  32.234  1.00 15.64
ATOM   12182  CD2 TYR  1827     -2.610 -30.407  29.622  1.00 14.53
ATOM   12183  CE2 TYR  1827     -3.401 -31.015  30.593  1.00 17.16
ATOM   12184  CZ  TYR  1827     -2.937 -31.101  31.893  1.00 16.99
ATOM   12185  OH  TYR  1827     -3.714 -31.686  32.861  1.00 16.74
ATOM   12186  C   TYR  1827     -0.194 -31.483  27.921  1.00 11.79
ATOM   12187  O   TYR  1827      0.010 -32.474  28.632  1.00 10.69
ATOM   12188  N   SER  1828     -1.026 -31.506  26.887  1.00  9.98
ATOM   12189  CA  SER  1828     -1.779 -32.713  26.553  1.00 12.49
ATOM   12190  CB  SER  1828     -2.744 -32.415  25.407  1.00 11.71
ATOM   12191  OG  SER  1828     -3.657 -31.420  25.819  1.00 16.55
ATOM   12192  C   SER  1828     -0.940 -33.940  26.240  1.00 11.86
ATOM   12193  O   SER  1828     -1.210 -35.027  26.763  1.00  9.82
ATOM   12194  N   PHE  1829      0.075 -33.780  25.401  1.00 11.47
```

```
ATOM   12195  CA  PHE  1829      0.921 -34.918  25.082  1.00 11.15
ATOM   12196  CB  PHE  1829      1.675 -34.690  23.760  1.00 10.81
ATOM   12197  CG  PHE  1829      0.831 -34.948  22.535  1.00 10.15
ATOM   12198  CD1 PHE  1829      0.259 -33.893  21.827  1.00 10.05
ATOM   12199  CD2 PHE  1829      0.566 -36.256  22.120  1.00  9.31
ATOM   12200  CE1 PHE  1829     -0.570 -34.134  20.723  1.00  9.40
ATOM   12201  CE2 PHE  1829     -0.259 -36.512  21.022  1.00 10.09
ATOM   12202  CZ  PHE  1829     -0.831 -35.451  20.317  1.00  9.43
ATOM   12203  C   PHE  1829      1.882 -35.224  26.241  1.00 11.61
ATOM   12204  O   PHE  1829      2.161 -36.391  26.531  1.00  9.86
ATOM   12205  N   ALA  1830      2.366 -34.199  26.939  1.00  9.53
ATOM   12206  CA  ALA  1830      3.269 -34.475  28.057  1.00 11.06
ATOM   12207  CB  ALA  1830      3.810 -33.168  28.663  1.00 13.38
ATOM   12208  C   ALA  1830      2.535 -35.284  29.131  1.00 12.72
ATOM   12209  O   ALA  1830      3.116 -36.172  29.759  1.00 12.34
ATOM   12210  N   LYS  1831      1.260 -34.963  29.336  1.00 10.44
ATOM   12211  CA  LYS  1831      0.435 -35.645  30.324  1.00 12.92
ATOM   12212  CB  LYS  1831     -0.884 -34.886  30.502  1.00 15.79
ATOM   12213  CG  LYS  1831     -1.892 -35.560  31.418  1.00 19.79
ATOM   12214  CD  LYS  1831     -1.386 -35.636  32.837  1.00 26.44
ATOM   12215  CE  LYS  1831     -2.551 -35.751  33.817  1.00 30.84
ATOM   12216  NZ  LYS  1831     -3.543 -36.796  33.410  1.00 32.55
ATOM   12217  C   LYS  1831      0.151 -37.071  29.866  1.00 10.03
ATOM   12218  O   LYS  1831      0.202 -38.026  30.658  1.00 10.29
ATOM   12219  N   LEU  1832     -0.158 -37.211  28.582  1.00  9.47
ATOM   12220  CA  LEU  1832     -0.449 -38.529  28.017  1.00 10.13
ATOM   12221  CB  LEU  1832     -0.811 -38.397  26.532  1.00  9.08
ATOM   12222  CG  LEU  1832     -1.337 -39.651  25.819  1.00  7.77
ATOM   12223  CD1 LEU  1832     -2.165 -39.212  24.629  1.00 10.73
ATOM   12224  CD2 LEU  1832     -0.187 -40.548  25.370  1.00  8.84
ATOM   12225  C   LEU  1832      0.764 -39.434  28.195  1.00 11.17
ATOM   12226  O   LEU  1832      0.632 -40.583  28.619  1.00 10.67
ATOM   12227  N   PHE  1833      1.948 -38.907  27.888  1.00  9.31
ATOM   12228  CA  PHE  1833      3.175 -39.690  28.021  1.00 10.32
ATOM   12229  CB  PHE  1833      4.385 -38.928  27.453  1.00 12.77
ATOM   12230  CG  PHE  1833      4.253 -38.554  25.983  1.00 10.12
ATOM   12231  CD1 PHE  1833      3.502 -39.331  25.105  1.00  9.09
ATOM   12232  CD2 PHE  1833      4.898 -37.427  25.483  1.00 11.46
ATOM   12233  CE1 PHE  1833      3.393 -38.989  23.746  1.00  9.84
ATOM   12234  CE2 PHE  1833      4.798 -37.074  24.125  1.00  9.94
ATOM   12235  CZ  PHE  1833      4.041 -37.860  23.254  1.00  8.51
ATOM   12236  C   PHE  1833      3.438 -40.043  29.486  1.00 11.08
ATOM   12237  O   PHE  1833      3.687 -41.204  29.810  1.00 11.34
ATOM   12238  N   ALA  1834      3.392 -39.045  30.369  1.00 11.64
ATOM   12239  CA  ALA  1834      3.631 -39.285  31.792  1.00 12.54
ATOM   12240  CB  ALA  1834      3.480 -37.973  32.590  1.00 15.99
ATOM   12241  C   ALA  1834      2.692 -40.349  32.367  1.00 14.96
ATOM   12242  O   ALA  1834      3.120 -41.206  33.150  1.00 13.96
ATOM   12243  N   ASP  1835      1.419 -40.313  31.981  1.00 14.27
ATOM   12244  CA  ASP  1835      0.468 -41.290  32.501  1.00 16.50
ATOM   12245  CB  ASP  1835     -0.968 -40.917  32.133  1.00 20.28
ATOM   12246  CG  ASP  1835     -1.457 -39.671  32.850  1.00 20.37
ATOM   12247  OD1 ASP  1835     -0.859 -39.275  33.875  1.00 22.29
ATOM   12248  OD2 ASP  1835     -2.457 -39.096  32.388  1.00 25.23
ATOM   12249  C   ASP  1835      0.734 -42.723  32.048  1.00 16.31
ATOM   12250  O   ASP  1835      0.176 -43.671  32.612  1.00 14.66
ATOM   12251  N   GLU  1836      1.571 -42.891  31.028  1.00 15.72
ATOM   12252  CA  GLU  1836      1.905 -44.234  30.557  1.00 14.86
ATOM   12253  CB  GLU  1836      1.966 -44.289  29.024  1.00 13.08
ATOM   12254  CG  GLU  1836      0.634 -44.045  28.334  1.00 13.80
ATOM   12255  CD  GLU  1836     -0.468 -44.917  28.905  1.00 18.45
ATOM   12256  OE1 GLU  1836     -0.221 -46.126  29.116  1.00 18.78
ATOM   12257  OE2 GLU  1836     -1.578 -44.395  29.144  1.00 18.26
ATOM   12258  C   GLU  1836      3.246 -44.688  31.123  1.00 15.46
ATOM   12259  O   GLU  1836      3.632 -45.844  30.970  1.00 16.15
ATOM   12260  N   GLY  1837      3.962 -43.770  31.762  1.00 13.82
ATOM   12261  CA  GLY  1837      5.252 -44.112  32.336  1.00 14.92
ATOM   12262  C   GLY  1837      6.442 -43.693  31.494  1.00 14.40
ATOM   12263  O   GLY  1837      7.567 -44.113  31.761  1.00 14.75
ATOM   12264  N   LEU  1838      6.197 -42.879  30.466  1.00 14.07
ATOM   12265  CA  LEU  1838      7.263 -42.384  29.588  1.00 16.57
ATOM   12266  CB  LEU  1838      6.703 -42.123  28.188  1.00 18.28
ATOM   12267  CG  LEU  1838      7.637 -42.371  27.005  1.00 21.26
ATOM   12268  CD1 LEU  1838      6.977 -41.842  25.744  1.00 18.89
ATOM   12269  CD2 LEU  1838      8.983 -41.721  27.225  1.00 20.44
ATOM   12270  C   LEU  1838      7.642 -41.073  30.267  1.00 17.17
ATOM   12271  O   LEU  1838      7.054 -40.024  29.987  1.00 16.93
```

```
ATOM  12272  N   ASN 1839      8.632 -41.160  31.152  1.00 19.21
ATOM  12273  CA  ASN 1839      9.066 -40.046  31.981  1.00 17.01
ATOM  12274  CB  ASN 1839      9.234 -40.551  33.423  1.00 20.88
ATOM  12275  CG  ASN 1839      8.011 -41.318  33.927  1.00 24.27
ATOM  12276  OD1 ASN 1839      6.867 -40.885  33.742  1.00 27.75
ATOM  12277  ND2 ASN 1839      8.248 -42.452  34.577  1.00 26.34
ATOM  12278  C   ASN 1839     10.317 -39.276  31.567  1.00 15.58
ATOM  12279  O   ASN 1839     10.956 -38.627  32.397  1.00 15.41
ATOM  12280  N   VAL 1840     10.684 -39.347  30.296  1.00 14.55
ATOM  12281  CA  VAL 1840     11.841 -38.607  29.830  1.00 13.23
ATOM  12282  CB  VAL 1840     13.027 -39.528  29.518  1.00 13.11
ATOM  12283  CG1 VAL 1840     14.221 -38.694  29.118  1.00 13.44
ATOM  12284  CG2 VAL 1840     13.348 -40.392  30.748  1.00 16.08
ATOM  12285  C   VAL 1840     11.409 -37.884  28.573  1.00 12.06
ATOM  12286  O   VAL 1840     11.116 -38.505  27.547  1.00 10.12
ATOM  12287  N   MET 1841     11.367 -36.562  28.663  1.00 10.19
ATOM  12288  CA  MET 1841     10.909 -35.758  27.548  1.00 10.11
ATOM  12289  CB  MET 1841      9.522 -35.193  27.873  1.00 12.54
ATOM  12290  CG  MET 1841      8.452 -36.273  27.916  1.00 15.69
ATOM  12291  SD  MET 1841      6.923 -35.649  28.511  1.00 15.98
ATOM  12292  CE  MET 1841      6.633 -36.759  29.903  1.00 13.37
ATOM  12293  C   MET 1841     11.864 -34.647  27.150  1.00 10.13
ATOM  12294  O   MET 1841     12.468 -33.969  27.992  1.00  9.95
ATOM  12295  N   LEU 1842     11.959 -34.456  25.839  1.00 10.43
ATOM  12296  CA  LEU 1842     12.838 -33.454  25.264  1.00 11.43
ATOM  12297  CB  LEU 1842     13.804 -34.123  24.283  1.00 14.79
ATOM  12298  CG  LEU 1842     14.979 -33.359  23.651  1.00 20.32
ATOM  12299  CD1 LEU 1842     14.650 -33.033  22.220  1.00 23.15
ATOM  12300  CD2 LEU 1842     15.339 -32.102  24.428  1.00 19.90
ATOM  12301  C   LEU 1842     12.060 -32.349  24.566  1.00 11.63
ATOM  12302  O   LEU 1842     11.246 -32.610  23.687  1.00  9.65
ATOM  12303  N   VAL 1843     12.299 -31.115  25.001  1.00 11.18
ATOM  12304  CA  VAL 1843     11.670 -29.947  24.395  1.00 12.10
ATOM  12305  CB  VAL 1843     11.215 -28.917  25.454  1.00 12.21
ATOM  12306  CG1 VAL 1843     10.567 -27.708  24.763  1.00 10.58
ATOM  12307  CG2 VAL 1843     10.212 -29.564  26.405  1.00 15.96
ATOM  12308  C   VAL 1843     12.800 -29.383  23.548  1.00 13.23
ATOM  12309  O   VAL 1843     13.601 -28.580  24.019  1.00 13.64
ATOM  12310  N   GLY 1844     12.877 -29.837  22.302  1.00 14.75
ATOM  12311  CA  GLY 1844     13.950 -29.406  21.424  1.00 15.77
ATOM  12312  C   GLY 1844     13.563 -28.393  20.375  1.00 13.72
ATOM  12313  O   GLY 1844     12.376 -28.167  20.127  1.00 11.89
ATOM  12314  N   ASP 1845     14.559 -27.781  19.742  1.00 14.76
ATOM  12315  CA  ASP 1845     14.246 -26.776  18.732  1.00 14.86
ATOM  12316  CB  ASP 1845     15.485 -25.952  18.342  1.00 16.86
ATOM  12317  CG  ASP 1845     16.649 -26.794  17.857  1.00 17.94
ATOM  12318  OD1 ASP 1845     16.470 -27.985  17.559  1.00 16.65
ATOM  12319  OD2 ASP 1845     17.757 -26.227  17.768  1.00 19.70
ATOM  12320  C   ASP 1845     13.567 -27.368  17.506  1.00 14.35
ATOM  12321  O   ASP 1845     13.185 -26.641  16.588  1.00 14.70
ATOM  12322  N   SER 1846     13.401 -28.689  17.493  1.00 14.18
ATOM  12323  CA  SER 1846     12.699 -29.334  16.385  1.00 12.45
ATOM  12324  CB  SER 1846     12.615 -30.848  16.607  1.00 14.08
ATOM  12325  OG  SER 1846     12.079 -31.168  17.888  1.00 16.33
ATOM  12326  C   SER 1846     11.291 -28.735  16.337  1.00 12.85
ATOM  12327  O   SER 1846     10.600 -28.821  15.316  1.00 13.17
ATOM  12328  N   LEU 1847     10.858 -28.146  17.451  1.00 10.11
ATOM  12329  CA  LEU 1847      9.532 -27.517  17.503  1.00  9.80
ATOM  12330  CB  LEU 1847      9.242 -26.969  18.911  1.00  8.90
ATOM  12331  CG  LEU 1847     10.043 -25.770  19.432  1.00  9.46
ATOM  12332  CD1 LEU 1847      9.440 -24.474  18.904  1.00  6.94
ATOM  12333  CD2 LEU 1847     10.039 -25.763  20.968  1.00 10.36
ATOM  12334  C   LEU 1847      9.436 -26.391  16.466  1.00  8.37
ATOM  12335  O   LEU 1847      8.341 -26.001  16.051  1.00  9.72
ATOM  12336  N   GLY 1848     10.585 -25.861  16.060  1.00  7.80
ATOM  12337  CA  GLY 1848     10.594 -24.804  15.061  1.00  9.90
ATOM  12338  C   GLY 1848      9.921 -25.270  13.783  1.00 12.28
ATOM  12339  O   GLY 1848      9.277 -24.495  13.077  1.00 11.95
ATOM  12340  N   MET 1849     10.048 -26.556  13.485  1.00 12.66
ATOM  12341  CA  MET 1849      9.446 -27.088  12.273  1.00 14.41
ATOM  12342  CB  MET 1849     10.406 -28.092  11.641  1.00 18.14
ATOM  12343  CG  MET 1849     11.766 -27.472  11.327  1.00 19.85
ATOM  12344  SD  MET 1849     12.956 -28.634  10.655  1.00 24.17
ATOM  12345  CE  MET 1849     12.389 -28.777   8.968  1.00 24.76
ATOM  12346  C   MET 1849      8.093 -27.724  12.538  1.00 12.05
ATOM  12347  O   MET 1849      7.097 -27.396  11.893  1.00 13.07
ATOM  12348  N   THR 1850      8.052 -28.613  13.518  1.00 13.89
```

```
ATOM   12349  CA   THR  1850        6.826 -29.321  13.852  1.00 13.07
ATOM   12350  CB   THR  1850        7.165 -30.523  14.756  1.00 16.49
ATOM   12351  OG1  THR  1850        6.003 -31.332  14.935  1.00 23.16
ATOM   12352  CG2  THR  1850        7.657 -30.044  16.106  1.00 13.78
ATOM   12353  C    THR  1850        5.722 -28.477  14.502  1.00 13.45
ATOM   12354  O    THR  1850        4.529 -28.704  14.272  1.00 14.06
ATOM   12355  N    VAL  1851        6.101 -27.505  15.318  1.00  9.38
ATOM   12356  CA   VAL  1851        5.095 -26.662  15.963  1.00 10.18
ATOM   12357  CB   VAL  1851        5.447 -26.405  17.456  1.00  9.38
ATOM   12358  CG1  VAL  1851        4.436 -25.440  18.073  1.00  9.31
ATOM   12359  CG2  VAL  1851        5.440 -27.719  18.219  1.00  9.77
ATOM   12360  C    VAL  1851        4.914 -25.316  15.262  1.00 10.37
ATOM   12361  O    VAL  1851        3.795 -24.940  14.935  1.00 10.77
ATOM   12362  N    GLN  1852        6.017 -24.604  15.025  1.00  9.98
ATOM   12363  CA   GLN  1852        5.959 -23.283  14.405  1.00 10.14
ATOM   12364  CB   GLN  1852        7.198 -22.486  14.801  1.00 10.92
ATOM   12365  CG   GLN  1852        7.379 -22.402  16.313  1.00 11.64
ATOM   12366  CD   GLN  1852        8.590 -21.591  16.702  1.00 11.56
ATOM   12367  OE1  GLN  1852        9.567 -21.530  15.963  1.00 11.26
ATOM   12368  NE2  GLN  1852        8.545 -20.990  17.882  1.00  8.34
ATOM   12369  C    GLN  1852        5.804 -23.277  12.891  1.00 11.52
ATOM   12370  O    GLN  1852        5.301 -22.314  12.315  1.00 10.45
ATOM   12371  N    GLY  1853        6.257 -24.340  12.239  1.00  9.89
ATOM   12372  CA   GLY  1853        6.119 -24.422  10.793  1.00 10.59
ATOM   12373  C    GLY  1853        7.217 -23.823   9.941  1.00 11.71
ATOM   12374  O    GLY  1853        6.991 -23.534   8.766  1.00 12.91
ATOM   12375  N    HIS  1854        8.395 -23.618  10.522  1.00 11.61
ATOM   12376  CA   HIS  1854        9.527 -23.076   9.768  1.00 14.51
ATOM   12377  CB   HIS  1854       10.534 -22.413  10.704  1.00 12.24
ATOM   12378  CG   HIS  1854        9.987 -21.230  11.432  1.00 13.00
ATOM   12379  CD2  HIS  1854        9.726 -21.033  12.747  1.00 11.78
ATOM   12380  ND1  HIS  1854        9.636 -20.060  10.792  1.00 11.06
ATOM   12381  CE1  HIS  1854        9.186 -19.193  11.682  1.00 13.39
ATOM   12382  NE2  HIS  1854        9.231 -19.758  12.875  1.00 12.54
ATOM   12383  C    HIS  1854       10.210 -24.225   9.037  1.00 15.33
ATOM   12384  O    HIS  1854       10.034 -25.389   9.395  1.00 14.84
ATOM   12385  N    ASP  1855       11.005 -23.888   8.028  1.00 18.03
ATOM   12386  CA   ASP  1855       11.718 -24.871   7.224  1.00 20.65
ATOM   12387  CB   ASP  1855       12.081 -24.247   5.871  1.00 26.04
ATOM   12388  CG   ASP  1855       13.150 -23.172   5.999  1.00 27.76
ATOM   12389  OD1  ASP  1855       14.313 -23.526   6.253  1.00 35.96
ATOM   12390  OD2  ASP  1855       12.827 -21.977   5.864  1.00 34.52
ATOM   12391  C    ASP  1855       12.993 -25.347   7.928  1.00 19.44
ATOM   12392  O    ASP  1855       13.645 -26.288   7.477  1.00 17.58
ATOM   12393  N    SER  1856       13.352 -24.685   9.026  1.00 17.83
ATOM   12394  CA   SER  1856       14.540 -25.050   9.794  1.00 15.27
ATOM   12395  CB   SER  1856       15.762 -24.257   9.323  1.00 16.75
ATOM   12396  OG   SER  1856       15.761 -22.953   9.884  1.00 13.49
ATOM   12397  C    SER  1856       14.289 -24.735  11.260  1.00 14.46
ATOM   12398  O    SER  1856       13.259 -24.163  11.613  1.00 13.21
ATOM   12399  N    THR  1857       15.244 -25.085  12.111  1.00 15.25
ATOM   12400  CA   THR  1857       15.094 -24.823  13.536  1.00 14.62
ATOM   12401  CB   THR  1857       15.712 -25.947  14.392  1.00 15.79
ATOM   12402  OG1  THR  1857       17.125 -25.993  14.169  1.00 14.91
ATOM   12403  CG2  THR  1857       15.106 -27.286  14.042  1.00 15.97
ATOM   12404  C    THR  1857       15.759 -23.516  13.964  1.00 12.81
ATOM   12405  O    THR  1857       15.666 -23.145  15.128  1.00 13.80
ATOM   12406  N    LEU  1858       16.425 -22.815  13.047  1.00 12.35
ATOM   12407  CA   LEU  1858       17.119 -21.582  13.434  1.00 12.54
ATOM   12408  CB   LEU  1858       17.920 -21.013  12.252  1.00 12.41
ATOM   12409  CG   LEU  1858       19.243 -21.743  11.959  1.00 18.92
ATOM   12410  CD1  LEU  1858       18.942 -23.123  11.376  1.00 18.27
ATOM   12411  CD2  LEU  1858       20.079 -20.929  10.975  1.00 16.42
ATOM   12412  C    LEU  1858       16.269 -20.465  14.049  1.00 12.00
ATOM   12413  O    LEU  1858       16.729 -19.749  14.943  1.00 12.79
ATOM   12414  N    PRO  1859       15.021 -20.296  13.587  1.00 11.97
ATOM   12415  CD   PRO  1859       14.411 -20.851  12.366  1.00 15.36
ATOM   12416  CA   PRO  1859       14.190 -19.228  14.159  1.00 12.87
ATOM   12417  CB   PRO  1859       12.981 -19.178  13.222  1.00 14.66
ATOM   12418  CG   PRO  1859       12.969 -20.528  12.567  1.00 20.26
ATOM   12419  C    PRO  1859       13.789 -19.393  15.623  1.00 12.26
ATOM   12420  O    PRO  1859       13.431 -18.418  16.287  1.00 11.90
ATOM   12421  N    VAL  1860       13.853 -20.620  16.125  1.00  9.89
ATOM   12422  CA   VAL  1860       13.487 -20.900  17.514  1.00  9.80
ATOM   12423  CB   VAL  1860       13.650 -22.397  17.824  1.00  9.99
ATOM   12424  CG1  VAL  1860       13.225 -22.674  19.258  1.00 10.58
ATOM   12425  CG2  VAL  1860       12.816 -23.222  16.855  1.00 10.13
```

```
ATOM   12426  C    VAL   1860      14.343 -20.116  18.507  1.00   9.52
ATOM   12427  O    VAL   1860      15.570 -20.165  18.449  1.00   9.57
ATOM   12428  N    THR   1861      13.691 -19.419  19.435  1.00   9.74
ATOM   12429  CA   THR   1861      14.412 -18.633  20.432  1.00  12.01
ATOM   12430  CB   THR   1861      13.845 -17.199  20.509  1.00  15.97
ATOM   12431  OG1  THR   1861      13.816 -16.623  19.192  1.00  20.58
ATOM   12432  CG2  THR   1861      14.722 -16.325  21.387  1.00  23.39
ATOM   12433  C    THR   1861      14.367 -19.270  21.822  1.00  11.32
ATOM   12434  O    THR   1861      13.603 -20.199  22.072  1.00   9.35
ATOM   12435  N    VAL   1862      15.214 -18.773  22.717  1.00  11.39
ATOM   12436  CA   VAL   1862      15.251 -19.275  24.079  1.00  11.60
ATOM   12437  CB   VAL   1862      16.309 -18.524  24.920  1.00  11.99
ATOM   12438  CG1  VAL   1862      16.238 -18.982  26.367  1.00  13.48
ATOM   12439  CG2  VAL   1862      17.715 -18.775  24.349  1.00  13.06
ATOM   12440  C    VAL   1862      13.864 -19.080  24.695  1.00  11.31
ATOM   12441  O    VAL   1862      13.366 -19.955  25.398  1.00  11.62
ATOM   12442  N    ALA   1863      13.227 -17.941  24.421  1.00  10.93
ATOM   12443  CA   ALA   1863      11.893 -17.697  24.966  1.00  10.99
ATOM   12444  CB   ALA   1863      11.380 -16.336  24.535  1.00  13.54
ATOM   12445  C    ALA   1863      10.925 -18.773  24.499  1.00  10.75
ATOM   12446  O    ALA   1863      10.087 -19.240  25.278  1.00   8.92
ATOM   12447  N    ASP   1864      11.013 -19.141  23.221  1.00   8.92
ATOM   12448  CA   ASP   1864      10.135 -20.191  22.669  1.00   9.84
ATOM   12449  CB   ASP   1864      10.452 -20.488  21.191  1.00   9.14
ATOM   12450  CG   ASP   1864      10.169 -19.322  20.263  1.00   9.13
ATOM   12451  OD1  ASP   1864       9.190 -18.581  20.490  1.00  11.77
ATOM   12452  OD2  ASP   1864      10.918 -19.167  19.272  1.00  10.86
ATOM   12453  C    ASP   1864      10.328 -21.487  23.456  1.00   9.58
ATOM   12454  O    ASP   1864       9.358 -22.134  23.861  1.00   8.41
ATOM   12455  N    ILE   1865      11.583 -21.876  23.660  1.00   8.67
ATOM   12456  CA   ILE   1865      11.879 -23.111  24.398  1.00   9.31
ATOM   12457  CB   ILE   1865      13.409 -23.355  24.520  1.00   9.33
ATOM   12458  CG2  ILE   1865      13.668 -24.518  25.470  1.00  11.52
ATOM   12459  CG1  ILE   1865      14.035 -23.606  23.134  1.00   9.79
ATOM   12460  CD1  ILE   1865      13.509 -24.855  22.397  1.00   8.07
ATOM   12461  C    ILE   1865      11.285 -23.036  25.808  1.00   9.25
ATOM   12462  O    ILE   1865      10.661 -23.991  26.283  1.00   9.30
ATOM   12463  N    ALA   1866      11.492 -21.906  26.483  1.00   7.42
ATOM   12464  CA   ALA   1866      10.969 -21.716  27.843  1.00   5.92
ATOM   12465  CB   ALA   1866      11.352 -20.335  28.373  1.00   6.24
ATOM   12466  C    ALA   1866       9.452 -21.879  27.895  1.00   8.68
ATOM   12467  O    ALA   1866       8.904 -22.480  28.826  1.00   6.71
ATOM   12468  N    TYR   1867       8.768 -21.319  26.903  1.00   7.88
ATOM   12469  CA   TYR   1867       7.307 -21.421  26.817  1.00   9.45
ATOM   12470  CB   TYR   1867       6.799 -20.700  25.550  1.00   8.36
ATOM   12471  CG   TYR   1867       5.304 -20.839  25.314  1.00   8.40
ATOM   12472  CD1  TYR   1867       4.384 -20.257  26.184  1.00  11.09
ATOM   12473  CE1  TYR   1867       3.010 -20.316  25.930  1.00  11.97
ATOM   12474  CD2  TYR   1867       4.812 -21.496  24.187  1.00   9.92
ATOM   12475  CE2  TYR   1867       3.440 -21.561  23.925  1.00   9.81
ATOM   12476  CZ   TYR   1867       2.550 -20.968  24.791  1.00   9.83
ATOM   12477  OH   TYR   1867       1.204 -20.972  24.502  1.00  13.41
ATOM   12478  C    TYR   1867       6.844 -22.874  26.773  1.00   9.90
ATOM   12479  O    TYR   1867       5.984 -23.308  27.556  1.00   8.93
ATOM   12480  N    HIS   1868       7.413 -23.629  25.843  1.00   7.87
ATOM   12481  CA   HIS   1868       7.025 -25.026  25.691  1.00  10.27
ATOM   12482  CB   HIS   1868       7.557 -25.543  24.349  1.00   9.57
ATOM   12483  CG   HIS   1868       6.843 -24.939  23.174  1.00   9.11
ATOM   12484  CD2  HIS   1868       7.194 -23.938  22.330  1.00   9.03
ATOM   12485  ND1  HIS   1868       5.543 -25.267  22.852  1.00   8.93
ATOM   12486  CE1  HIS   1868       5.120 -24.490  21.870  1.00   8.96
ATOM   12487  NE2  HIS   1868       6.102 -23.674  21.534  1.00   8.75
ATOM   12488  C    HIS   1868       7.483 -25.860  26.874  1.00  10.42
ATOM   12489  O    HIS   1868       6.800 -26.804  27.266  1.00   9.01
ATOM   12490  N    THR   1869       8.611 -25.481  27.469  1.00  10.19
ATOM   12491  CA   THR   1869       9.133 -26.197  28.635  1.00  10.01
ATOM   12492  CB   THR   1869      10.520 -25.639  29.032  1.00  11.08
ATOM   12493  OG1  THR   1869      11.474 -25.995  28.022  1.00  11.79
ATOM   12494  CG2  THR   1869      10.984 -26.205  30.378  1.00  10.61
ATOM   12495  C    THR   1869       8.156 -26.077  29.809  1.00  10.50
ATOM   12496  O    THR   1869       7.896 -27.056  30.501  1.00   9.02
ATOM   12497  N    ALA   1870       7.607 -24.884  30.036  1.00   9.46
ATOM   12498  CA   ALA   1870       6.673 -24.719  31.146  1.00  10.75
ATOM   12499  CB   ALA   1870       6.301 -23.242  31.331  1.00  11.04
ATOM   12500  C    ALA   1870       5.416 -25.553  30.909  1.00  10.58
ATOM   12501  O    ALA   1870       4.886 -26.180  31.831  1.00  11.31
ATOM   12502  N    ALA   1871       4.939 -25.568  29.672  1.00   9.74
```

```
ATOM   12503  CA   ALA   1871       3.738 -26.332  29.347  1.00 10.34
ATOM   12504  CB   ALA   1871       3.323 -26.056  27.907  1.00  9.64
ATOM   12505  C    ALA   1871       3.965 -27.828  29.559  1.00 10.87
ATOM   12506  O    ALA   1871       3.104 -28.514  30.116  1.00 11.14
ATOM   12507  N    VAL   1872       5.119 -28.333  29.126  1.00  8.50
ATOM   12508  CA   VAL   1872       5.418 -29.754  29.300  1.00  9.80
ATOM   12509  CB   VAL   1872       6.724 -30.161  28.569  1.00  8.60
ATOM   12510  CG1  VAL   1872       7.169 -31.563  29.019  1.00  5.70
ATOM   12511  CG2  VAL   1872       6.483 -30.174  27.061  1.00  8.96
ATOM   12512  C    VAL   1872       5.518 -30.078  30.788  1.00 10.76
ATOM   12513  O    VAL   1872       4.979 -31.085  31.245  1.00 11.38
ATOM   12514  N    ARG   1873       6.192 -29.221  31.549  1.00 10.87
ATOM   12515  CA   ARG   1873       6.311 -29.450  32.980  1.00  9.93
ATOM   12516  CB   ARG   1873       7.153 -28.348  33.647  1.00  7.52
ATOM   12517  CG   ARG   1873       7.288 -28.505  35.177  1.00 10.26
ATOM   12518  CD   ARG   1873       7.857 -29.878  35.567  1.00 12.74
ATOM   12519  NE   ARG   1873       9.289 -30.011  35.288  1.00 15.69
ATOM   12520  CZ   ARG   1873       9.939 -31.172  35.250  1.00 12.78
ATOM   12521  NH1  ARG   1873       9.290 -32.304  35.461  1.00 13.43
ATOM   12522  NH2  ARG   1873      11.242 -31.205  35.025  1.00 12.86
ATOM   12523  C    ARG   1873       4.924 -29.522  33.645  1.00 10.69
ATOM   12524  O    ARG   1873       4.726 -30.310  34.562  1.00 12.04
ATOM   12525  N    ARG   1874       3.968 -28.713  33.190  1.00  9.73
ATOM   12526  CA   ARG   1874       2.631 -28.750  33.774  1.00 10.96
ATOM   12527  CB   ARG   1874       1.736 -27.640  33.206  1.00 12.21
ATOM   12528  CG   ARG   1874       2.285 -26.245  33.444  1.00 15.36
ATOM   12529  CD   ARG   1874       1.230 -25.139  33.364  1.00 17.99
ATOM   12530  NE   ARG   1874       1.868 -23.843  33.592  1.00 15.73
ATOM   12531  CZ   ARG   1874       2.419 -23.101  32.637  1.00 19.11
ATOM   12532  NH1  ARG   1874       2.397 -23.517  31.373  1.00 14.81
ATOM   12533  NH2  ARG   1874       3.027 -21.961  32.955  1.00 17.47
ATOM   12534  C    ARG   1874       1.970 -30.110  33.546  1.00 11.41
ATOM   12535  O    ARG   1874       1.273 -30.630  34.424  1.00 14.88
ATOM   12536  N    GLY   1875       2.200 -30.696  32.380  1.00 11.22
ATOM   12537  CA   GLY   1875       1.606 -31.990  32.077  1.00 10.19
ATOM   12538  C    GLY   1875       2.323 -33.162  32.720  1.00 10.02
ATOM   12539  O    GLY   1875       1.708 -34.182  33.021  1.00  9.60
ATOM   12540  N    ALA   1876       3.627 -33.012  32.935  1.00 11.21
ATOM   12541  CA   ALA   1876       4.455 -34.071  33.527  1.00 11.50
ATOM   12542  CB   ALA   1876       5.309 -34.718  32.430  1.00 14.27
ATOM   12543  C    ALA   1876       5.350 -33.513  34.633  1.00 12.82
ATOM   12544  O    ALA   1876       6.560 -33.374  34.453  1.00 11.92
ATOM   12545  N    PRO   1877       4.771 -33.210  35.806  1.00 14.04
ATOM   12546  CD   PRO   1877       3.375 -33.476  36.216  1.00 14.97
ATOM   12547  CA   PRO   1877       5.554 -32.657  36.920  1.00 15.62
ATOM   12548  CB   PRO   1877       4.491 -32.375  37.984  1.00 15.70
ATOM   12549  CG   PRO   1877       3.469 -33.421  37.736  1.00 18.20
ATOM   12550  C    PRO   1877       6.699 -33.510  37.462  1.00 16.14
ATOM   12551  O    PRO   1877       7.589 -32.992  38.132  1.00 18.76
ATOM   12552  N    ASN   1878       6.686 -34.801  37.146  1.00 15.89
ATOM   12553  CA   ASN   1878       7.709 -35.718  37.638  1.00 17.91
ATOM   12554  CB   ASN   1878       7.038 -36.936  38.288  1.00 22.40
ATOM   12555  CG   ASN   1878       6.081 -36.552  39.400  1.00 25.24
ATOM   12556  OD1  ASN   1878       6.463 -35.889  40.359  1.00 29.66
ATOM   12557  ND2  ASN   1878       4.824 -36.974  39.275  1.00 28.39
ATOM   12558  C    ASN   1878       8.710 -36.209  36.595  1.00 17.02
ATOM   12559  O    ASN   1878       9.604 -36.986  36.919  1.00 16.69
ATOM   12560  N    CYS   1879       8.578 -35.763  35.349  1.00 15.26
ATOM   12561  CA   CYS   1879       9.487 -36.238  34.309  1.00 13.68
ATOM   12562  CB   CYS   1879       8.890 -35.991  32.917  1.00 14.20
ATOM   12563  SG   CYS   1879       9.037 -34.260  32.286  1.00 16.39
ATOM   12564  C    CYS   1879      10.865 -35.596  34.365  1.00 13.72
ATOM   12565  O    CYS   1879      11.085 -34.604  35.062  1.00 13.75
ATOM   12566  N    LEU   1880      11.802 -36.213  33.658  1.00 13.56
ATOM   12567  CA   LEU   1880      13.130 -35.660  33.540  1.00 13.22
ATOM   12568  CB   LEU   1880      14.185 -36.740  33.317  1.00 12.70
ATOM   12569  CG   LEU   1880      15.583 -36.162  33.044  1.00 12.13
ATOM   12570  CD1  LEU   1880      16.056 -35.315  34.242  1.00 14.50
ATOM   12571  CD2  LEU   1880      16.561 -37.299  32.782  1.00 15.41
ATOM   12572  C    LEU   1880      12.925 -34.860  32.259  1.00 11.47
ATOM   12573  O    LEU   1880      12.573 -35.430  31.231  1.00 12.83
ATOM   12574  N    LEU   1881      13.124 -33.546  32.324  1.00  8.79
ATOM   12575  CA   LEU   1881      12.881 -32.705  31.166  1.00 10.82
ATOM   12576  CB   LEU   1881      11.882 -31.600  31.534  1.00 11.46
ATOM   12577  CG   LEU   1881      11.152 -30.776  30.459  1.00 14.79
ATOM   12578  CD1  LEU   1881      10.169 -29.889  31.176  1.00 14.22
ATOM   12579  CD2  LEU   1881      12.096 -29.933  29.599  1.00 17.18
```

```
ATOM    12580   C    LEU   1881      14.140  -32.077   30.601   1.00  11.03
ATOM    12581   O    LEU   1881      14.802  -31.293   31.271   1.00  13.13
ATOM    12582   N    LEU   1882      14.460  -32.434   29.362   1.00  10.50
ATOM    12583   CA   LEU   1882      15.622  -31.885   28.698   1.00  11.79
ATOM    12584   CB   LEU   1882      16.333  -32.952   27.868   1.00  11.43
ATOM    12585   CG   LEU   1882      17.203  -33.973   28.607   1.00  15.97
ATOM    12586   CD1  LEU   1882      16.363  -34.799   29.575   1.00  17.09
ATOM    12587   CD2  LEU   1882      17.882  -34.878   27.577   1.00  16.23
ATOM    12588   C    LEU   1882      15.146  -30.767   27.787   1.00  13.92
ATOM    12589   O    LEU   1882      14.172  -30.926   27.051   1.00  17.46
ATOM    12590   N    ALA   1883      15.808  -29.623   27.852   1.00  11.32
ATOM    12591   CA   ALA   1883      15.426  -28.520   26.990   1.00  12.45
ATOM    12592   CB   ALA   1883      14.960  -27.342   27.824   1.00  12.10
ATOM    12593   C    ALA   1883      16.624  -28.132   26.144   1.00  11.52
ATOM    12594   O    ALA   1883      17.748  -28.030   26.639   1.00  10.54
ATOM    12595   N    ASP   1884      16.384  -27.941   24.853   1.00  12.57
ATOM    12596   CA   ASP   1884      17.447  -27.533   23.935   1.00  12.76
ATOM    12597   CB   ASP   1884      16.981  -27.649   22.477   1.00  13.52
ATOM    12598   CG   ASP   1884      17.351  -28.961   21.828   1.00  15.04
ATOM    12599   OD1  ASP   1884      17.887  -29.851   22.513   1.00  16.51
ATOM    12600   OD2  ASP   1884      17.098  -29.083   20.610   1.00  14.48
ATOM    12601   C    ASP   1884      17.785  -26.069   24.139   1.00  14.66
ATOM    12602   O    ASP   1884      16.934  -25.277   24.550   1.00  13.13
ATOM    12603   N    LEU   1885      19.040  -25.719   23.880   1.00  12.80
ATOM    12604   CA   LEU   1885      19.449  -24.318   23.862   1.00  12.01
ATOM    12605   CB   LEU   1885      20.860  -24.097   24.411   1.00  11.51
ATOM    12606   CG   LEU   1885      20.951  -24.044   25.932   1.00  13.75
ATOM    12607   CD1  LEU   1885      22.335  -23.553   26.373   1.00  14.19
ATOM    12608   CD2  LEU   1885      19.862  -23.123   26.460   1.00  15.95
ATOM    12609   C    LEU   1885      19.472  -24.182   22.340   1.00  10.80
ATOM    12610   O    LEU   1885      20.170  -24.932   21.653   1.00  11.71
ATOM    12611   N    PRO   1886      18.696  -23.245   21.793   1.00  10.45
ATOM    12612   CD   PRO   1886      17.852  -22.290   22.538   1.00  10.25
ATOM    12613   CA   PRO   1886      18.606  -23.014   20.350   1.00  11.23
ATOM    12614   CB   PRO   1886      17.356  -22.158   20.234   1.00  11.55
ATOM    12615   CG   PRO   1886      17.457  -21.296   21.474   1.00  11.59
ATOM    12616   C    PRO   1886      19.819  -22.372   19.670   1.00  11.51
ATOM    12617   O    PRO   1886      20.825  -22.065   20.314   1.00  13.04
ATOM    12618   N    PHE   1887      19.692  -22.178   18.358   1.00   9.35
ATOM    12619   CA   PHE   1887      20.723  -21.578   17.516   1.00  10.68
ATOM    12620   CB   PHE   1887      20.125  -21.260   16.136   1.00  11.05
ATOM    12621   CG   PHE   1887      20.992  -20.370   15.277   1.00  12.47
ATOM    12622   CD1  PHE   1887      22.251  -20.793   14.856   1.00  15.73
ATOM    12623   CD2  PHE   1887      20.546  -19.110   14.890   1.00  14.62
ATOM    12624   CE1  PHE   1887.     23.058  -19.975   14.057   1.00  15.72
ATOM    12625   CE2  PHE   1887      21.340  -18.276   14.092   1.00  13.51
ATOM    12626   CZ   PHE   1887      22.598  -18.717   13.679   1.00  15.84
ATOM    12627   C    PHE   1887      21.290  -20.311   18.153   1.00  10.86
ATOM    12628   O    PHE   1887      20.547  -19.417   18.545   1.00   9.48
ATOM    12629   N    MET   1888      22.614  -20.260   18.250   1.00   8.23
ATOM    12630   CA   MET   1888      23.337  -19.130   18.827   1.00  10.91
ATOM    12631   CB   MET   1888      23.230  -17.906   17.906   1.00  13.53
ATOM    12632   CG   MET   1888      24.386  -16.914   18.080   1.00  15.10
ATOM    12633   SD   MET   1888      26.011  -17.588   17.599   1.00  16.09
ATOM    12634   CE   MET   1888      26.079  -17.055   15.901   1.00  19.82
ATOM    12635   C    MET   1888      22.920  -18.736   20.251   1.00  12.89
ATOM    12636   O    MET   1888      23.012  -17.564   20.629   1.00  13.39
ATOM    12637   N    ALA   1889      22.468  -19.707   21.040   1.00  10.65
ATOM    12638   CA   ALA   1889      22.079  -19.421   22.413   1.00  11.53
ATOM    12639   CB   ALA   1889      20.803  -20.186   22.791   1.00  12.05
ATOM    12640   C    ALA   1889      23.200  -19.776   23.383   1.00  11.33
ATOM    12641   O    ALA   1889      23.067  -19.595   24.595   1.00  13.56
ATOM    12642   N    TYR   1890      24.305  -20.292   22.859   1.00  11.07
ATOM    12643   CA   TYR   1890      25.439  -20.634   23.707   1.00  12.50
ATOM    12644   CB   TYR   1890      25.378  -22.121   24.089   1.00  12.92
ATOM    12645   CG   TYR   1890      25.067  -23.060   22.939   1.00  13.64
ATOM    12646   CD1  TYR   1890      26.089  -23.716   22.253   1.00  14.95
ATOM    12647   CE1  TYR   1890      25.809  -24.579   21.191   1.00  15.46
ATOM    12648   CD2  TYR   1890      23.750  -23.288   22.535   1.00  14.15
ATOM    12649   CE2  TYR   1890      23.456  -24.150   21.471   1.00  15.84
ATOM    12650   CZ   TYR   1890      24.488  -24.788   20.809   1.00  16.93
ATOM    12651   OH   TYR   1890      24.206  -25.631   19.756   1.00  19.58
ATOM    12652   C    TYR   1890      26.743  -20.287   23.000   1.00  12.88
ATOM    12653   O    TYR   1890      27.716  -21.043   23.037   1.00  13.54
ATOM    12654   N    ALA   1891      26.741  -19.114   22.371   1.00  11.98
ATOM    12655   CA   ALA   1891      27.885  -18.600   21.618   1.00  13.29
ATOM    12656   CB   ALA   1891      27.472  -17.339   20.862   1.00  13.53
```

```
ATOM  12657  C    ALA  1891    29.100 -18.305  22.490  1.00 13.87
ATOM  12658  O    ALA  1891    30.231 -18.288  22.009  1.00 13.32
ATOM  12659  N    THR  1892    28.850 -18.059  23.769  1.00 12.24
ATOM  12660  CA   THR  1892    29.905 -17.796  24.737  1.00 12.51
ATOM  12661  CB   THR  1892    30.098 -16.286  25.011  1.00 11.96
ATOM  12662  OG1  THR  1892    28.968 -15.783  25.737  1.00 12.50
ATOM  12663  CG2  THR  1892    30.235 -15.516  23.709  1.00 13.36
ATOM  12664  C    THR  1892    29.448 -18.432  26.033  1.00 13.46
ATOM  12665  O    THR  1892    28.252 -18.666  26.231  1.00 14.08
ATOM  12666  N    PRO  1893    30.393 -18.732  26.932  1.00 14.40
ATOM  12667  CD   PRO  1893    31.860 -18.731  26.789  1.00 13.32
ATOM  12668  CA   PRO  1893    29.988 -19.339  28.196  1.00 14.16
ATOM  12669  CB   PRO  1893    31.316 -19.513  28.929  1.00 17.60
ATOM  12670  CG   PRO  1893    32.274 -19.784  27.800  1.00 15.21
ATOM  12671  C    PRO  1893    28.992 -18.442  28.936  1.00 13.95
ATOM  12672  O    PRO  1893    27.964 -18.910  29.425  1.00 11.45
ATOM  12673  N    GLU  1894    29.273 -17.144  28.994  1.00 15.13
ATOM  12674  CA   GLU  1894    28.374 -16.224  29.681  1.00 15.41
ATOM  12675  CB   GLU  1894    28.946 -14.803  29.634  1.00 19.41
ATOM  12676  CG   GLU  1894    28.154 -13.789  30.437  1.00 28.99
ATOM  12677  CD   GLU  1894    29.047 -12.721  31.046  1.00 32.24
ATOM  12678  OE1  GLU  1894    29.945 -12.223  30.334  1.00 34.50
ATOM  12679  OE2  GLU  1894    28.849 -12.379  32.233  1.00 37.07
ATOM  12680  C    GLU  1894    26.951 -16.261  29.111  1.00 14.63
ATOM  12681  O    GLU  1894    25.981 -16.257  29.869  1.00 14.06
ATOM  12682  N    GLN  1895    26.811 -16.307  27.787  1.00 13.27
ATOM  12683  CA   GLN  1895    25.473 -16.360  27.184  1.00 14.64
ATOM  12684  CB   GLN  1895    25.539 -16.123  25.675  1.00 18.45
ATOM  12685  CG   GLN  1895    26.046 -14.746  25.293  1.00 26.37
ATOM  12686  CD   GLN  1895    25.806 -14.442  23.835  1.00 30.60
ATOM  12687  OE1  GLN  1895    24.660 -14.396  23.389  1.00 35.03
ATOM  12688  NE2  GLN  1895    26.883 -14.236  23.077  1.00 35.29
ATOM  12689  C    GLN  1895    24.810 -17.704  27.445  1.00 14.04
ATOM  12690  O    GLN  1895    23.587 -17.791  27.603  1.00 12.48
ATOM  12691  N    ALA  1896    25.616 -18.758  27.465  1.00 11.38
ATOM  12692  CA   ALA  1896    25.085 -20.086  27.732  1.00 11.76
ATOM  12693  CB   ALA  1896    26.188 -21.149  27.572  1.00 11.03
ATOM  12694  C    ALA  1896    24.510 -20.130  29.153  1.00 11.59
ATOM  12695  O    ALA  1896    23.460 -20.733  29.387  1.00 11.46
ATOM  12696  N    PHE  1897    25.191 -19.475  30.094  1.00 10.77
ATOM  12697  CA   PHE  1897    24.738 -19.446  31.485  1.00 11.53
ATOM  12698  CB   PHE  1897    25.690 -18.639  32.390  1.00  9.99
ATOM  12699  CG   PHE  1897    27.119 -19.116  32.392  1.00 10.28
ATOM  12700  CD1  PHE  1897    27.439 -20.445  32.150  1.00 12.24
ATOM  12701  CD2  PHE  1897    28.153 -18.211  32.657  1.00  9.95
ATOM  12702  CE1  PHE  1897    28.775 -20.879  32.166  1.00 12.67
ATOM  12703  CE2  PHE  1897    29.489 -18.623  32.677  1.00 11.90
ATOM  12704  CZ   PHE  1897    29.799 -19.959  32.429  1.00 13.96
ATOM  12705  C    PHE  1897    23.364 -18.814  31.627  1.00 11.72
ATOM  12706  O    PHE  1897    22.498 -19.343  32.322  1.00 10.76
ATOM  12707  N    GLU  1898    23.183 -17.667  30.986  1.00 11.55
ATOM  12708  CA   GLU  1898    21.924 -16.945  31.060  1.00 14.41
ATOM  12709  CB   GLU  1898    22.072 -15.550  30.444  1.00 17.46
ATOM  12710  CG   GLU  1898    20.906 -14.623  30.790  1.00 25.46
ATOM  12711  CD   GLU  1898    20.594 -14.618  32.284  1.00 28.92
ATOM  12712  OE1  GLU  1898    21.449 -14.157  33.072  1.00 31.30
ATOM  12713  OE2  GLU  1898    19.495 -15.105  32.675  1.00 34.77
ATOM  12714  C    GLU  1898    20.793 -17.692  30.382  1.00 12.46
ATOM  12715  O    GLU  1898    19.701 -17.792  30.933  1.00 11.48
ATOM  12716  N    ASN  1899    21.045 -18.229  29.192  1.00 12.32
ATOM  12717  CA   ASN  1899    19.988 -18.947  28.489  1.00 11.52
ATOM  12718  CB   ASN  1899    20.318 -19.064  26.999  1.00 12.87
ATOM  12719  CG   ASN  1899    20.455 -17.700  26.329  1.00 14.75
ATOM  12720  OD1  ASN  1899    19.690 -16.777  26.621  1.00 10.94
ATOM  12721  ND2  ASN  1899    21.405 -17.579  25.411  1.00 11.61
ATOM  12722  C    ASN  1899    19.686 -20.311  29.096  1.00 11.22
ATOM  12723  O    ASN  1899    18.534 -20.758  29.053  1.00 10.29
ATOM  12724  N    ALA  1900    20.690 -20.985  29.658  1.00 10.29
ATOM  12725  CA   ALA  1900    20.430 -22.271  30.307  1.00  9.38
ATOM  12726  CB   ALA  1900    21.746 -22.926  30.770  1.00  8.73
ATOM  12727  C    ALA  1900    19.543 -21.970  31.522  1.00  9.37
ATOM  12728  O    ALA  1900    18.551 -22.646  31.762  1.00  8.92
ATOM  12729  N    ALA  1901    19.908 -20.936  32.275  1.00 10.46
ATOM  12730  CA   ALA  1901    19.147 -20.551  33.458  1.00  9.71
ATOM  12731  CB   ALA  1901    19.748 -19.294  34.086  1.00  9.98
ATOM  12732  C    ALA  1901    17.686 -20.305  33.109  1.00  9.18
ATOM  12733  O    ALA  1901    16.783 -20.733  33.823  1.00  9.21
```

```
ATOM  12734  N    THR  1902      17.456 -19.601  32.007  1.00  9.93
ATOM  12735  CA   THR  1902      16.092 -19.293  31.588  1.00 10.15
ATOM  12736  CB   THR  1902      16.081 -18.483  30.279  1.00 10.21
ATOM  12737  OG1  THR  1902      16.814 -17.268  30.484  1.00 10.06
ATOM  12738  CG2  THR  1902      14.647 -18.122  29.878  1.00  9.60
ATOM  12739  C    THR  1902      15.264 -20.549  31.403  1.00 10.35
ATOM  12740  O    THR  1902      14.156 -20.659  31.941  1.00  8.19
ATOM  12741  N    VAL  1903      15.801 -21.506  30.655  1.00 10.07
ATOM  12742  CA   VAL  1903      15.052 -22.723  30.410  1.00 12.02
ATOM  12743  CB   VAL  1903      15.620 -23.470  29.168  1.00 13.59
ATOM  12744  CG1  VAL  1903      16.916 -24.192  29.494  1.00 12.92
ATOM  12745  CG2  VAL  1903      14.577 -24.403  28.622  1.00 21.31
ATOM  12746  C    VAL  1903      14.936 -23.627  31.648  1.00 10.38
ATOM  12747  O    VAL  1903      13.961 -24.369  31.787  1.00  9.04
ATOM  12748  N    MET  1904      15.901 -23.545  32.558  1.00 10.20
ATOM  12749  CA   MET  1904      15.842 -24.351  33.778  1.00 11.10
ATOM  12750  CB   MET  1904      17.223 -24.428  34.444  1.00 12.49
ATOM  12751  CG   MET  1904      18.307 -25.051  33.599  1.00 18.01
ATOM  12752  SD   MET  1904      18.226 -26.845  33.611  1.00 19.52
ATOM  12753  CE   MET  1904      18.566 -27.204  35.406  1.00 18.10
ATOM  12754  C    MET  1904      14.826 -23.742  34.761  1.00  9.98
ATOM  12755  O    MET  1904      14.108 -24.479  35.433  1.00 11.43
ATOM  12756  N    ARG  1905      14.770 -22.412  34.860  1.00  8.90
ATOM  12757  CA   ARG  1905      13.799 -21.809  35.775  1.00  8.03
ATOM  12758  CB   ARG  1905      13.982 -20.295  35.901  1.00  8.24
ATOM  12759  CG   ARG  1905      15.331 -19.885  36.473  1.00 12.25
ATOM  12760  CD   ARG  1905      15.304 -18.465  37.003  1.00 11.94
ATOM  12761  NE   ARG  1905      16.652 -17.990  37.289  1.00 15.25
ATOM  12762  CZ   ARG  1905      17.447 -17.418  36.393  1.00 13.90
ATOM  12763  NH1  ARG  1905      17.029 -17.233  35.149  1.00 14.60
ATOM  12764  NH2  ARG  1905      18.677 -17.063  36.733  1.00 17.42
ATOM  12765  C    ARG  1905      12.398 -22.099  35.256  1.00  9.53
ATOM  12766  O    ARG  1905      11.445 -22.195  36.024  1.00 10.47
ATOM  12767  N    ALA  1906      12.291 -22.274  33.946  1.00  8.58
ATOM  12768  CA   ALA  1906      11.011 -22.538  33.317  1.00  8.67
ATOM  12769  CB   ALA  1906      11.100 -22.235  31.814  1.00  9.41
ATOM  12770  C    ALA  1906      10.511 -23.963  33.535  1.00 10.77
ATOM  12771  O    ALA  1906       9.351 -24.270  33.250  1.00 10.28
ATOM  12772  N    GLY  1907      11.382 -24.841  34.018  1.00 10.02
ATOM  12773  CA   GLY  1907      10.962 -26.209  34.291  1.00  9.93
ATOM  12774  C    GLY  1907      11.889 -27.330  33.869  1.00 12.15
ATOM  12775  O    GLY  1907      11.684 -28.485  34.261  1.00 11.23
ATOM  12776  N    ALA  1908      12.907 -27.009  33.081  1.00 11.34
ATOM  12777  CA   ALA  1908      13.851 -28.026  32.612  1.00 11.08
ATOM  12778  CB   ALA  1908      14.702 -27.455  31.475  1.00 10.75
ATOM  12779  C    ALA  1908      14.758 -28.529  33.739  1.00 11.38
ATOM  12780  O    ALA  1908      14.955 -27.848  34.747  1.00  8.45
ATOM  12781  N    ASN  1909      15.303 -29.729  33.567  1.00 11.47
ATOM  12782  CA   ASN  1909      16.205 -30.302  34.564  1.00 10.53
ATOM  12783  CB   ASN  1909      15.804 -31.727  34.939  1.00 12.92
ATOM  12784  CG   ASN  1909      14.432 -31.812  35.556  1.00 14.93
ATOM  12785  OD1  ASN  1909      14.140 -31.192  36.589  1.00 14.28
ATOM  12786  ND2  ASN  1909      13.577 -32.595  34.928  1.00 10.46
ATOM  12787  C    ASN  1909      17.593 -30.385  33.970  1.00 11.82
ATOM  12788  O    ASN  1909      18.569 -30.560  34.682  1.00 12.44
ATOM  12789  N    MET  1910      17.670 -30.262  32.653  1.00 10.66
ATOM  12790  CA   MET  1910      18.934 -30.391  31.960  1.00 11.23
ATOM  12791  CB   MET  1910      19.228 -31.888  31.799  1.00 11.33
ATOM  12792  CG   MET  1910      20.340 -32.264  30.850  1.00 15.81
ATOM  12793  SD   MET  1910      20.549 -34.076  30.827  1.00 17.80
ATOM  12794  CE   MET  1910      21.887 -34.311  32.027  1.00 18.58
ATOM  12795  C    MET  1910      18.822 -29.716  30.601  1.00 10.32
ATOM  12796  O    MET  1910      17.730 -29.632  30.036  1.00 10.64
ATOM  12797  N    VAL  1911      19.941 -29.223  30.086  1.00  9.77
ATOM  12798  CA   VAL  1911      19.942 -28.561  28.791  1.00 10.49
ATOM  12799  CB   VAL  1911      20.552 -27.149  28.904  1.00 14.32
ATOM  12800  CG1  VAL  1911      20.525 -26.477  27.563  1.00 20.77
ATOM  12801  CG2  VAL  1911      19.784 -26.322  29.924  1.00 16.29
ATOM  12802  C    VAL  1911      20.752 -29.368  27.782  1.00 11.18
ATOM  12803  O    VAL  1911      21.758 -29.989  28.128  1.00 12.97
ATOM  12804  N    LYS  1912      20.304 -29.364  26.535  1.00 11.26
ATOM  12805  CA   LYS  1912      21.019 -30.062  25.480  1.00 11.63
ATOM  12806  CB   LYS  1912      20.088 -30.999  24.712  1.00 11.49
ATOM  12807  CG   LYS  1912      20.806 -31.774  23.598  1.00 13.76
ATOM  12808  CD   LYS  1912      20.027 -33.015  23.160  1.00 15.10
ATOM  12809  CE   LYS  1912      18.742 -32.667  22.415  1.00 17.50
ATOM  12810  NZ   LYS  1912      18.980 -32.003  21.096  1.00 16.50
```

```
ATOM   12811  C    LYS   1912        21.607 -29.027  24.522  1.00 10.56
ATOM   12812  O    LYS   1912        20.928 -28.077  24.128  1.00 12.27
ATOM   12813  N    ILE   1913        22.875 -29.208  24.169  1.00 11.16
ATOM   12814  CA   ILE   1913        23.566 -28.301  23.260  1.00 14.22
ATOM   12815  CB   ILE   1913        24.541 -27.375  24.034  1.00 16.27
ATOM   12816  CG2  ILE   1913        23.738 -26.374  24.883  1.00 15.84
ATOM   12817  CG1  ILE   1913        25.463 -28.206  24.925  1.00 18.46
ATOM   12818  CD1  ILE   1913        26.415 -27.376  25.786  1.00 18.67
ATOM   12819  C    ILE   1913        24.335 -29.121  22.228  1.00 15.17
ATOM   12820  O    ILE   1913        24.929 -30.149  22.563  1.00 15.09
ATOM   12821  N    GLU   1914        24.326 -28.671  20.975  1.00 15.40
ATOM   12822  CA   GLU   1914        25.003 -29.392  19.889  1.00 16.44
ATOM   12823  CB   GLU   1914        24.205 -29.272  18.582  1.00 19.74
ATOM   12824  CG   GLU   1914        22.709 -29.426  18.725  1.00 25.29
ATOM   12825  CD   GLU   1914        21.987 -29.391  17.387  1.00 28.05
ATOM   12826  OE1  GLU   1914        22.415 -28.626  16.497  1.00 28.95
ATOM   12827  OE2  GLU   1914        20.987 -30.120  17.231  1.00 31.69
ATOM   12828  C    GLU   1914        26.411 -28.893  19.623  1.00 15.88
ATOM   12829  O    GLU   1914        26.630 -27.696  19.463  1.00 14.70
ATOM   12830  N    GLY   1915        27.371 -29.805  19.550  1.00 16.86
ATOM   12831  CA   GLY   1915        28.736 -29.379  19.288  1.00 18.17
ATOM   12832  C    GLY   1915        29.783 -30.355  19.788  1.00 20.08
ATOM   12833  O    GLY   1915        29.497 -31.203  20.631  1.00 21.39
ATOM   12834  N    GLY   1916        30.999 -30.223  19.264  1.00 20.87
ATOM   12835  CA   GLY   1916        32.086 -31.091  19.662  1.00 22.00
ATOM   12836  C    GLY   1916        32.949 -30.518  20.768  1.00 22.33
ATOM   12837  O    GLY   1916        32.449 -29.886  21.705  1.00 21.23
ATOM   12838  N    GLU   1917        34.258 -30.720  20.656  1.00 22.96
ATOM   12839  CA   GLU   1917        35.178 -30.232  21.677  1.00 22.46
ATOM   12840  CB   GLU   1917        36.608 -30.681  21.376  1.00 26.72
ATOM   12841  CG   GLU   1917        36.939 -32.014  22.003  1.00 33.75
ATOM   12842  CD   GLU   1917        38.367 -32.087  22.494  1.00 34.57
ATOM   12843  OE1  GLU   1917        38.778 -31.190  23.257  1.00 37.45
ATOM   12844  OE2  GLU   1917        39.067 -33.048  22.120  1.00 39.06
ATOM   12845  C    GLU   1917        35.189 -28.738  21.944  1.00 19.95
ATOM   12846  O    GLU   1917        35.604 -28.324  23.018  1.00 18.13
ATOM   12847  N    TRP   1918        34.747 -27.920  20.994  1.00 18.83
ATOM   12848  CA   TRP   1918        34.771 -26.492  21.255  1.00 16.44
ATOM   12849  CB   TRP   1918        34.372 -25.680  20.010  1.00 16.23
ATOM   12850  CG   TRP   1918        32.918 -25.705  19.630  1.00 15.75
ATOM   12851  CD2  TRP   1918        31.940 -24.702  19.927  1.00 15.59
ATOM   12852  CE2  TRP   1918        30.728 -25.106  19.323  1.00 16.90
ATOM   12853  CE3  TRP   1918        31.970 -23.499  20.646  1.00 17.10
ATOM   12854  CD1  TRP   1918        32.275 -26.655  18.882  1.00 18.69
ATOM   12855  NE1  TRP   1918        30.960 -26.300  18.691  1.00 17.49
ATOM   12856  CZ2  TRP   1918        29.554 -24.345  19.412  1.00 14.08
ATOM   12857  CZ3  TRP   1918        30.802 -22.739  20.738  1.00 17.47
ATOM   12858  CH2  TRP   1918        29.607 -23.170  20.121  1.00 17.12
ATOM   12859  C    TRP   1918        33.878 -26.130  22.439  1.00 15.03
ATOM   12860  O    TRP   1918        34.044 -25.078  23.051  1.00 15.31
ATOM   12861  N    LEU   1919        32.944 -27.013  22.778  1.00 14.71
ATOM   12862  CA   LEU   1919        32.021 -26.761  23.891  1.00 14.78
ATOM   12863  CB   LEU   1919        30.682 -27.454  23.626  1.00 15.37
ATOM   12864  CG   LEU   1919        29.808 -26.866  22.519  1.00 17.11
ATOM   12865  CD1  LEU   1919        28.579 -27.749  22.330  1.00 18.09
ATOM   12866  CD2  LEU   1919        29.400 -25.442  22.894  1.00 16.88
ATOM   12867  C    LEU   1919        32.530 -27.206  25.259  1.00 14.85
ATOM   12868  O    LEU   1919        31.896 -26.926  26.270  1.00 12.57
ATOM   12869  N    VAL   1920        33.667 -27.893  25.298  1.00 15.61
ATOM   12870  CA   VAL   1920        34.189 -28.386  26.569  1.00 15.42
ATOM   12871  CB   VAL   1920        35.582 -29.008  26.379  1.00 16.95
ATOM   12872  CG1  VAL   1920        36.302 -29.125  27.717  1.00 16.07
ATOM   12873  CG2  VAL   1920        35.425 -30.389  25.764  1.00 15.13
ATOM   12874  C    VAL   1920        34.216 -27.366  27.707  1.00 16.07
ATOM   12875  O    VAL   1920        33.758 -27.662  28.808  1.00 15.60
ATOM   12876  N    GLU   1921        34.737 -26.172  27.448  1.00 15.79
ATOM   12877  CA   GLU   1921        34.785 -25.141  28.483  1.00 16.09
ATOM   12878  CB   GLU   1921        35.480 -23.888  27.949  1.00 18.74
ATOM   12879  CG   GLU   1921        35.428 -22.701  28.889  1.00 24.44
ATOM   12880  CD   GLU   1921        36.271 -21.543  28.394  1.00 27.12
ATOM   12881  OE1  GLU   1921        36.105 -21.136  27.224  1.00 28.89
ATOM   12882  OE2  GLU   1921        37.104 -21.045  29.177  1.00 30.38
ATOM   12883  C    GLU   1921        33.373 -24.780  28.935  1.00 15.64
ATOM   12884  O    GLU   1921        33.095 -24.650  30.128  1.00 14.95
ATOM   12885  N    THR   1922        32.478 -24.623  27.971  1.00 16.48
ATOM   12886  CA   THR   1922        31.102 -24.268  28.289  1.00 15.13
ATOM   12887  CB   THR   1922        30.285 -24.074  27.017  1.00 14.39
```

```
ATOM  12888  OG1 THR  1922      30.846 -22.993  26.265  1.00 14.42
ATOM  12889  CG2 THR  1922      28.834 -23.753  27.354  1.00 13.35
ATOM  12890  C   THR  1922      30.439 -25.321  29.161  1.00 13.15
ATOM  12891  O   THR  1922      29.759 -24.990  30.136  1.00 13.84
ATOM  12892  N   VAL  1923      30.632 -26.589  28.815  1.00 14.02
ATOM  12893  CA  VAL  1923      30.042 -27.671  29.590  1.00 13.28
ATOM  12894  CB  VAL  1923      30.285 -29.039  28.911  1.00 13.90
ATOM  12895  CG1 VAL  1923      29.800 -30.171  29.818  1.00 14.64
ATOM  12896  CG2 VAL  1923      29.552 -29.080  27.584  1.00 14.39
ATOM  12897  C   VAL  1923      30.611 -27.687  31.000  1.00 15.48
ATOM  12898  O   VAL  1923      29.863 -27.755  31.982  1.00 12.62
ATOM  12899  N   GLN  1924      31.932 -27.598  31.109  1.00 15.37
ATOM  12900  CA  GLN  1924      32.566 -27.606  32.434  1.00 17.23
ATOM  12901  CB  GLN  1924      34.087 -27.396  32.310  1.00 19.46
ATOM  12902  CG  GLN  1924      34.796 -28.434  31.437  1.00 23.92
ATOM  12903  CD  GLN  1924      36.306 -28.223  31.344  1.00 28.58
ATOM  12904  OE1 GLN  1924      36.778 -27.120  31.054  1.00 27.54
ATOM  12905  NE2 GLN  1924      37.069 -29.293  31.575  1.00 28.43
ATOM  12906  C   GLN  1924      31.966 -26.527  33.344  1.00 16.21
ATOM  12907  O   GLN  1924      31.576 -26.811  34.470  1.00 15.27
ATOM  12908  N   MET  1925      31.881 -25.299  32.843  1.00 15.24
ATOM  12909  CA  MET  1925      31.356 -24.188  33.624  1.00 14.73
ATOM  12910  CB  MET  1925      31.688 -22.875  32.921  1.00 17.14
ATOM  12911  CG  MET  1925      33.189 -22.574  32.914  1.00 17.57
ATOM  12912  SD  MET  1925      33.579 -21.081  31.980  1.00 19.95
ATOM  12913  CE  MET  1925      33.416 -19.842  33.296  1.00 22.55
ATOM  12914  C   MET  1925      29.872 -24.267  33.944  1.00 15.19
ATOM  12915  O   MET  1925      29.452 -23.902  35.044  1.00 12.00
ATOM  12916  N   LEU  1926      29.070 -24.735  32.995  1.00 13.48
ATOM  12917  CA  LEU  1926      27.638 -24.868  33.240  1.00 14.38
ATOM  12918  CB  LEU  1926      26.934 -25.398  31.989  1.00 12.37
ATOM  12919  CG  LEU  1926      26.531 -24.365  30.944  1.00 10.67
ATOM  12920  CD1 LEU  1926      26.209 -25.077  29.631  1.00 10.46
ATOM  12921  CD2 LEU  1926      25.320 -23.570  31.450  1.00 11.83
ATOM  12922  C   LEU  1926      27.389 -25.827  34.391  1.00 15.78
ATOM  12923  O   LEU  1926      26.604 -25.542  35.298  1.00 14.90
ATOM  12924  N   THR  1927      28.061 -26.974  34.348  1.00 17.82
ATOM  12925  CA  THR  1927      27.891 -27.988  35.385  1.00 19.33
ATOM  12926  CB  THR  1927      28.736 -29.236  35.074  1.00 22.11
ATOM  12927  OG1 THR  1927      28.239 -29.852  33.873  1.00 23.96
ATOM  12928  CG2 THR  1927      28.653 -30.240  36.219  1.00 26.37
ATOM  12929  C   THR  1927      28.222 -27.472  36.780  1.00 20.67
ATOM  12930  O   THR  1927      27.482 -27.738  37.731  1.00 19.83
ATOM  12931  N   GLU  1928      29.325 -26.741  36.926  1.00 19.57
ATOM  12932  CA  GLU  1928      29.639 -26.217  38.254  1.00 20.59
ATOM  12933  CB  GLU  1928      31.087 -25.716  38.340  1.00 23.01
ATOM  12934  CG  GLU  1928      31.562 -24.901  37.176  1.00 24.98
ATOM  12935  CD  GLU  1928      32.983 -24.379  37.372  1.00 25.34
ATOM  12936  OE1 GLU  1928      33.819 -25.097  37.963  1.00 28.59
ATOM  12937  OE2 GLU  1928      33.271 -23.258  36.920  1.00 24.69
ATOM  12938  C   GLU  1928      28.648 -25.121  38.649  1.00 19.64
ATOM  12939  O   GLU  1928      28.514 -24.801  39.830  1.00 20.05
ATOM  12940  N   ARG  1929      27.943 -24.558  37.666  1.00 16.54
ATOM  12941  CA  ARG  1929      26.938 -23.536  37.948  1.00 15.92
ATOM  12942  CB  ARG  1929      27.001 -22.425  36.901  1.00 15.43
ATOM  12943  CG  ARG  1929      28.222 -21.543  37.095  1.00 16.86
ATOM  12944  CD  ARG  1929      28.530 -20.685  35.884  1.00 16.91
ATOM  12945  NE  ARG  1929      29.786 -19.956  36.071  1.00 15.63
ATOM  12946  CZ  ARG  1929      30.972 -20.533  36.258  1.00 17.47
ATOM  12947  NH1 ARG  1929      31.080 -21.855  36.284  1.00 20.43
ATOM  12948  NH2 ARG  1929      32.056 -19.786  36.418  1.00 17.19
ATOM  12949  C   ARG  1929      25.531 -24.134  38.032  1.00 16.03
ATOM  12950  O   ARG  1929      24.528 -23.480  37.724  1.00 15.35
ATOM  12951  N   ALA  1930      25.492 -25.398  38.446  1.00 15.30
ATOM  12952  CA  ALA  1930      24.262 -26.152  38.674  1.00 14.02
ATOM  12953  CB  ALA  1930      23.364 -25.373  39.645  1.00 17.52
ATOM  12954  C   ALA  1930      23.437 -26.610  37.473  1.00 14.90
ATOM  12955  O   ALA  1930      22.302 -27.051  37.655  1.00 12.87
ATOM  12956  N   VAL  1931      23.974 -26.510  36.260  1.00 13.13
ATOM  12957  CA  VAL  1931      23.217 -26.948  35.100  1.00 13.22
ATOM  12958  CB  VAL  1931      23.220 -25.876  33.974  1.00 14.49
ATOM  12959  CG1 VAL  1931      22.325 -26.328  32.829  1.00 11.71
ATOM  12960  CG2 VAL  1931      22.746 -24.539  34.522  1.00 14.16
ATOM  12961  C   VAL  1931      23.752 -28.239  34.492  1.00 13.32
ATOM  12962  O   VAL  1931      24.905 -28.296  34.046  1.00 13.87
ATOM  12963  N   PRO  1932      22.940 -29.307  34.502  1.00 13.80
ATOM  12964  CD  PRO  1932      21.715 -29.508  35.290  1.00 14.21
```

```
ATOM   12965  CA  PRO  1932      23.395 -30.567  33.908  1.00 13.32
ATOM   12966  CB  PRO  1932      22.396 -31.596  34.437  1.00 15.25
ATOM   12967  CG  PRO  1932      21.178 -30.791  34.712  1.00 20.66
ATOM   12968  C   PRO  1932      23.310 -30.391  32.396  1.00 11.97
ATOM   12969  O   PRO  1932      22.413 -29.713  31.897  1.00 12.08
ATOM   12970  N   VAL  1933      24.228 -31.012  31.669  1.00 11.35
ATOM   12971  CA  VAL  1933      24.270 -30.869  30.218  1.00 11.25
ATOM   12972  CB  VAL  1933      25.577 -30.149  29.793  1.00 12.56
ATOM   12973  CG1 VAL  1933      25.676 -30.079  28.280  1.00 10.86
ATOM   12974  CG2 VAL  1933      25.634 -28.768  30.411  1.00 10.60
ATOM   12975  C   VAL  1933      24.205 -32.194  29.474  1.00 13.16
ATOM   12976  O   VAL  1933      24.850 -33.170  29.853  1.00 12.41
ATOM   12977  N   CYS  1934      23.417 -32.218  28.411  1.00 11.26
ATOM   12978  CA  CYS  1934      23.298 -33.393  27.574  1.00 11.02
ATOM   12979  CB  CYS  1934      21.822 -33.687  27.271  1.00 11.90
ATOM   12980  SG  CYS  1934      21.573 -35.022  26.038  1.00 13.45
ATOM   12981  C   CYS  1934      24.031 -32.993  26.301  1.00 13.27
ATOM   12982  O   CYS  1934      23.773 -31.929  25.739  1.00 12.86
ATOM   12983  N   GLY  1935      24.978 -33.817  25.872  1.00 12.09
ATOM   12984  CA  GLY  1935      25.705 -33.515  24.655  1.00 10.39
ATOM   12985  C   GLY  1935      24.870 -33.961  23.475  1.00 11.98
ATOM   12986  O   GLY  1935      23.843 -34.627  23.654  1.00 12.33
ATOM   12987  N   HIS  1936      25.305 -33.601  22.272  1.00 10.95
ATOM   12988  CA  HIS  1936      24.585 -33.957  21.054  1.00 13.54
ATOM   12989  CB  HIS  1936      23.453 -32.945  20.813  1.00 13.71
ATOM   12990  CG  HIS  1936      22.547 -33.285  19.669  1.00 16.35
ATOM   12991  CD2 HIS  1936      22.722 -34.088  18.593  1.00 17.45
ATOM   12992  ND1 HIS  1936      21.297 -32.719  19.522  1.00 13.36
ATOM   12993  CE1 HIS  1936      20.745 -33.155  18.406  1.00 17.41
ATOM   12994  NE2 HIS  1936      21.589 -33.986  17.821  1.00 19.02
ATOM   12995  C   HIS  1936      25.568 -33.974  19.889  1.00 12.21
ATOM   12996  O   HIS  1936      26.069 -32.929  19.460  1.00 12.99
ATOM   12997  N   LEU  1937      25.825 -35.176  19.382  1.00 13.16
ATOM   12998  CA  LEU  1937      26.767 -35.384  18.287  1.00 12.94
ATOM   12999  CB  LEU  1937      27.994 -36.157  18.797  1.00 12.68
ATOM   13000  CG  LEU  1937      28.833 -35.486  19.884  1.00 13.53
ATOM   13001  CD1 LEU  1937      29.914 -36.448  20.395  1.00 15.18
ATOM   13002  CD2 LEU  1937      29.449 -34.228  19.334  1.00 12.64
ATOM   13003  C   LEU  1937      26.141 -36.137  17.126  1.00 14.83
ATOM   13004  O   LEU  1937      25.103 -36.785  17.274  1.00 12.98
ATOM   13005  N   GLY  1938      26.792 -36.055  15.972  1.00 16.63
ATOM   13006  CA  GLY  1938      26.283 -36.719  14.790  1.00 22.86
ATOM   13007  C   GLY  1938      25.712 -35.675  13.854  1.00 27.34
ATOM   13008  O   GLY  1938      26.411 -34.740  13.466  1.00 27.92
ATOM   13009  N   LEU  1939      24.438 -35.824  13.504  1.00 30.73
ATOM   13010  CA  LEU  1939      23.766 -34.889  12.611  1.00 34.21
ATOM   13011  CB  LEU  1939      22.714 -35.638  11.786  1.00 35.61
ATOM   13012  CG  LEU  1939      22.029 -34.928  10.615  1.00 37.63
ATOM   13013  CD1 LEU  1939      21.406 -35.969   9.702  1.00 38.32
ATOM   13014  CD2 LEU  1939      20.973 -33.955  11.127  1.00 38.51
ATOM   13015  C   LEU  1939      23.116 -33.768  13.420  1.00 36.56
ATOM   13016  O   LEU  1939      22.114 -33.980  14.101  1.00 37.71
ATOM   13017  N   THR  1940      23.700 -32.576  13.343  1.00 38.68
ATOM   13018  CA  THR  1940      23.192 -31.417  14.070  1.00 40.34
ATOM   13019  CB  THR  1940      24.337 -30.684  14.791  1.00 40.75
ATOM   13020  OG1 THR  1940      25.398 -30.420  13.864  1.00 39.49
ATOM   13021  CG2 THR  1940      24.867 -31.530  15.934  1.00 41.22
ATOM   13022  C   THR  1940      22.490 -30.447  13.124  1.00 41.01
ATOM   13023  O   THR  1940      23.139 -29.714  12.379  1.00 42.38
ATOM   13024  N   PRO  1941      21.147 -30.430  13.152  1.00 42.07
ATOM   13025  CD  PRO  1941      20.294 -31.239  14.041  1.00 43.13
ATOM   13026  CA  PRO  1941      20.333 -29.558  12.297  1.00 42.02
ATOM   13027  CB  PRO  1941      18.903 -29.997  12.615  1.00 42.88
ATOM   13028  CG  PRO  1941      18.995 -30.474  14.019  1.00 44.03
ATOM   13029  C   PRO  1941      20.549 -28.058  12.486  1.00 41.54
ATOM   13030  O   PRO  1941      20.198 -27.265  11.611  1.00 41.77
ATOM   13031  N   GLN  1942      21.121 -27.663  13.619  1.00 40.66
ATOM   13032  CA  GLN  1942      21.376 -26.245  13.857  1.00 40.39
ATOM   13033  CB  GLN  1942      21.804 -26.012  15.307  1.00 39.97
ATOM   13034  CG  GLN  1942      20.658 -25.656  16.244  1.00 38.76
ATOM   13035  CD  GLN  1942      21.086 -25.620  17.701  1.00 38.71
ATOM   13036  OE1 GLN  1942      22.092 -24.999  18.053  1.00 35.82
ATOM   13037  NE2 GLN  1942      20.316 -26.284  18.559  1.00 36.70
ATOM   13038  C   GLN  1942      22.450 -25.722  12.906  1.00 40.11
ATOM   13039  O   GLN  1942      22.541 -24.519  12.660  1.00 39.36
ATOM   13040  N   SER  1943      23.256 -26.637  12.372  1.00 40.02
ATOM   13041  CA  SER  1943      24.329 -26.281  11.443  1.00 39.90
```

```
ATOM   13042  CB   SER   1943        25.637 -26.959  11.862  1.00 40.15
ATOM   13043  OG   SER   1943        25.992 -26.629  13.195  1.00 42.09
ATOM   13044  C    SER   1943        23.978 -26.703  10.017  1.00 39.67
ATOM   13045  O    SER   1943        24.864 -26.933   9.194  1.00 38.51
ATOM   13046  N    VAL   1944        22.682 -26.805   9.734  1.00 40.21
ATOM   13047  CA   VAL   1944        22.209 -27.205   8.411  1.00 40.13
ATOM   13048  CB   VAL   1944        20.660 -27.155   8.335  1.00 40.32
ATOM   13049  CG1  VAL   1944        20.160 -25.763   8.698  1.00 40.26
ATOM   13050  CG2  VAL   1944        20.196 -27.547   6.936  1.00 40.12
ATOM   13051  C    VAL   1944        22.794 -26.352   7.284  1.00 40.09
ATOM   13052  O    VAL   1944        23.178 -26.873   6.236  1.00 40.03
ATOM   13053  N    ASN   1945        22.862 -25.043   7.501  1.00 40.77
ATOM   13054  CA   ASN   1945        23.397 -24.128   6.498  1.00 42.02
ATOM   13055  CB   ASN   1945        23.120 -22.681   6.911  1.00 39.36
ATOM   13056  CG   ASN   1945        21.634 -22.388   7.028  1.00 38.68
ATOM   13057  OD1  ASN   1945        20.905 -22.428   6.035  1.00 33.53
ATOM   13058  ND2  ASN   1945        21.176 -22.102   8.244  1.00 34.93
ATOM   13059  C    ASN   1945        24.893 -24.336   6.292  1.00 43.74
ATOM   13060  O    ASN   1945        25.413 -24.102   5.200  1.00 43.69
ATOM   13061  N    ILE   1946        25.579 -24.774   7.344  1.00 46.06
ATOM   13062  CA   ILE   1946        27.014 -25.024   7.275  1.00 48.85
ATOM   13063  CB   ILE   1946        27.590 -25.387   8.664  1.00 48.08
ATOM   13064  CG2  ILE   1946        29.044 -25.828   8.527  1.00 48.67
ATOM   13065  CG1  ILE   1946        27.476 -24.188   9.609  1.00 47.10
ATOM   13066  CD1  ILE   1946        28.319 -22.994   9.203  1.00 45.47
ATOM   13067  C    ILE   1946        27.294 -26.176   6.316  1.00 51.55
ATOM   13068  O    ILE   1946        27.949 -26.001   5.287  1.00 51.88
ATOM   13069  N    PHE   1947        26.788 -27.354   6.666  1.00 54.57
ATOM   13070  CA   PHE   1947        26.970 -28.551   5.855  1.00 57.12
ATOM   13071  CB   PHE   1947        26.427 -29.770   6.605  1.00 59.02
ATOM   13072  CG   PHE   1947        27.106 -30.023   7.924  1.00 61.39
ATOM   13073  CD1  PHE   1947        28.397 -30.544   7.969  1.00 62.43
ATOM   13074  CD2  PHE   1947        26.461 -29.726   9.121  1.00 61.93
ATOM   13075  CE1  PHE   1947        29.036 -30.767   9.189  1.00 62.77
ATOM   13076  CE2  PHE   1947        27.090 -29.945  10.345  1.00 62.58
ATOM   13077  CZ   PHE   1947        28.380 -30.467  10.379  1.00 62.90
ATOM   13078  C    PHE   1947        26.260 -28.407   4.514  1.00 58.08
ATOM   13079  O    PHE   1947        26.884 -28.505   3.455  1.00 59.24
ATOM   13080  N    GLY   1948        24.954 -28.169   4.566  1.00 58.06
ATOM   13081  CA   GLY   1948        24.180 -28.015   3.349  1.00 58.62
ATOM   13082  C    GLY   1948        22.862 -28.761   3.410  1.00 59.00
ATOM   13083  O    GLY   1948        22.084 -28.740   2.458  1.00 58.82
ATOM   13084  N    GLY   1949        22.613 -29.420   4.537  1.00 59.35
ATOM   13085  CA   GLY   1949        21.381 -30.168   4.701  1.00 60.55
ATOM   13086  C    GLY   1949        21.459 -31.129   5.870  1.00 61.51
ATOM   13087  O    GLY   1949        22.026 -30.801   6.914  1.00 61.37
ATOM   13088  N    TYR   1950        20.889 -32.319   5.695  1.00 62.15
ATOM   13089  CA   TYR   1950        20.898 -33.337   6.745  1.00 62.76
ATOM   13090  CB   TYR   1950        19.524 -33.419   7.420  1.00 63.27
ATOM   13091  CG   TYR   1950        18.892 -32.075   7.706  1.00 63.93
ATOM   13092  CD1  TYR   1950        18.228 -31.368   6.702  1.00 64.37
ATOM   13093  CE1  TYR   1950        17.653 -30.124   6.955  1.00 64.90
ATOM   13094  CD2  TYR   1950        18.967 -31.502   8.975  1.00 64.29
ATOM   13095  CE2  TYR   1950        18.398 -30.258   9.239  1.00 64.47
ATOM   13096  CZ   TYR   1950        17.741 -29.576   8.225  1.00 65.14
ATOM   13097  OH   TYR   1950        17.169 -28.347   8.477  1.00 65.21
ATOM   13098  C    TYR   1950        21.266 -34.703   6.163  1.00 62.54
ATOM   13099  O    TYR   1950        20.515 -35.272   5.371  1.00 62.37
ATOM   13100  N    LYS   1951        22.423 -35.223   6.564  1.00 62.40
ATOM   13101  CA   LYS   1951        22.898 -36.517   6.081  1.00 62.04
ATOM   13102  CB   LYS   1951        23.874 -36.315   4.919  1.00 62.86
ATOM   13103  CG   LYS   1951        23.260 -35.611   3.721  1.00 64.49
ATOM   13104  CD   LYS   1951        24.309 -35.241   2.688  1.00 65.92
ATOM   13105  CE   LYS   1951        23.687 -34.471   1.532  1.00 66.41
ATOM   13106  NZ   LYS   1951        24.709 -33.991   0.560  1.00 67.31
ATOM   13107  C    LYS   1951        23.579 -37.316   7.190  1.00 60.75
ATOM   13108  O    LYS   1951        24.018 -36.755   8.195  1.00 60.94
ATOM   13109  N    VAL   1952        23.659 -38.630   6.999  1.00 58.89
ATOM   13110  CA   VAL   1952        24.284 -39.511   7.979  1.00 57.24
ATOM   13111  CB   VAL   1952        24.287 -40.975   7.491  1.00 57.00
ATOM   13112  CG1  VAL   1952        24.913 -41.875   8.545  1.00 57.09
ATOM   13113  CG2  VAL   1952        22.868 -41.422   7.184  1.00 56.86
ATOM   13114  C    VAL   1952        25.722 -39.079   8.243  1.00 56.27
ATOM   13115  O    VAL   1952        26.511 -38.917   7.313  1.00 55.83
ATOM   13116  N    GLN   1953        26.055 -38.898   9.517  1.00 54.84
ATOM   13117  CA   GLN   1953        27.395 -38.479   9.907  1.00 53.67
ATOM   13118  CB   GLN   1953        27.303 -37.270  10.841  1.00 53.92
```

```
ATOM   13119  CG   GLN  1953      28.623 -36.560  11.083  1.00 55.91
ATOM   13120  CD   GLN  1953      29.188 -35.934   9.820  1.00 56.76
ATOM   13121  OE1  GLN  1953      28.532 -35.114   9.174  1.00 55.89
ATOM   13122  NE2  GLN  1953      30.413 -36.318   9.463  1.00 56.77
ATOM   13123  C    GLN  1953      28.137 -39.623  10.600  1.00 52.67
ATOM   13124  O    GLN  1953      27.517 -40.550  11.116  1.00 52.18
ATOM   13125  N    GLY  1954      29.466 -39.558  10.598  1.00 51.97
ATOM   13126  CA   GLY  1954      30.256 -40.598  11.236  1.00 51.94
ATOM   13127  C    GLY  1954      30.855 -41.601  10.266  1.00 51.75
ATOM   13128  O    GLY  1954      31.612 -42.488  10.664  1.00 51.15
ATOM   13129  N    ARG  1955      30.514 -41.462   8.990  1.00 51.95
ATOM   13130  CA   ARG  1955      31.018 -42.353   7.953  1.00 52.89
ATOM   13131  CB   ARG  1955      30.331 -42.042   6.619  1.00 54.06
ATOM   13132  CG   ARG  1955      28.840 -42.353   6.588  1.00 56.32
ATOM   13133  CD   ARG  1955      28.588 -43.852   6.597  1.00 58.03
ATOM   13134  NE   ARG  1955      27.164 -44.184   6.599  1.00 59.33
ATOM   13135  CZ   ARG  1955      26.313 -43.872   5.625  1.00 59.73
ATOM   13136  NH1  ARG  1955      26.735 -43.212   4.554  1.00 59.72
ATOM   13137  NH2  ARG  1955      25.036 -44.223   5.720  1.00 60.10
ATOM   13138  C    ARG  1955      32.529 -42.205   7.797  1.00 52.91
ATOM   13139  O    ARG  1955      33.034 -41.102   7.582  1.00 52.93
ATOM   13140  N    GLY  1956      33.245 -43.320   7.909  1.00 52.81
ATOM   13141  CA   GLY  1956      34.692 -43.290   7.771  1.00 52.45
ATOM   13142  C    GLY  1956      35.420 -43.286   9.101  1.00 51.95
ATOM   13143  O    GLY  1956      34.882 -42.834  10.110  1.00 52.28
ATOM   13144  N    ASP  1957      36.650 -43.787   9.101  1.00 51.06
ATOM   13145  CA   ASP  1957      37.450 -43.841  10.319  1.00 50.18
ATOM   13146  CB   ASP  1957      38.777 -44.553  10.050  1.00 52.74
ATOM   13147  CG   ASP  1957      38.584 -45.974   9.572  1.00 55.34
ATOM   13148  OD1  ASP  1957      37.909 -46.752  10.283  1.00 56.35
ATOM   13149  OD2  ASP  1957      39.109 -46.315   8.489  1.00 57.00
ATOM   13150  C    ASP  1957      37.727 -42.446  10.867  1.00 47.95
ATOM   13151  O    ASP  1957      37.620 -42.209  12.069  1.00 47.47
ATOM   13152  N    GLU  1958      38.087 -41.529   9.977  1.00 45.13
ATOM   13153  CA   GLU  1958      38.387 -40.160  10.368  1.00 43.01
ATOM   13154  CB   GLU  1958      38.677 -39.318   9.127  1.00 45.74
ATOM   13155  CG   GLU  1958      39.190 -37.924   9.429  1.00 48.92
ATOM   13156  CD   GLU  1958      39.353 -37.092   8.174  1.00 51.94
ATOM   13157  OE1  GLU  1958      39.989 -37.585   7.215  1.00 52.78
ATOM   13158  OE2  GLU  1958      38.850 -35.947   8.148  1.00 53.38
ATOM   13159  C    GLU  1958      37.231 -39.540  11.146  1.00 40.27
ATOM   13160  O    GLU  1958      37.380 -39.175  12.313  1.00 37.28
ATOM   13161  N    ALA  1959      36.079 -39.424  10.493  1.00 36.37
ATOM   13162  CA   ALA  1959      34.900 -38.846  11.129  1.00 34.01
ATOM   13163  CB   ALA  1959      33.754 -38.760  10.130  1.00 33.11
ATOM   13164  C    ALA  1959      34.484 -39.683  12.333  1.00 31.93
ATOM   13165  O    ALA  1959      34.046 -39.149  13.353  1.00 31.65
ATOM   13166  N    GLY  1960      34.625 -40.997  12.203  1.00 30.55
ATOM   13167  CA   GLY  1960      34.262 -41.895  13.283  1.00 29.48
ATOM   13168  C    GLY  1960      35.089 -41.676  14.535  1.00 28.48
ATOM   13169  O    GLY  1960      34.553 -41.644  15.644  1.00 27.01
ATOM   13170  N    ASP  1961      36.397 -41.520  14.365  1.00 27.04
ATOM   13171  CA   ASP  1961      37.284 -41.310  15.502  1.00 27.15
ATOM   13172  CB   ASP  1961      38.752 -41.439  15.076  1.00 29.17
ATOM   13173  CG   ASP  1961      39.120 -42.849  14.653  1.00 31.98
ATOM   13174  OD1  ASP  1961      38.398 -43.797  15.040  1.00 30.19
ATOM   13175  OD2  ASP  1961      40.143 -43.009  13.944  1.00 33.17
ATOM   13176  C    ASP  1961      37.053 -39.947  16.135  1.00 25.99
ATOM   13177  O    ASP  1961      37.114 -39.803  17.358  1.00 25.23
ATOM   13178  N    GLN  1962      36.791 -38.945  15.301  1.00 24.65
ATOM   13179  CA   GLN  1962      36.549 -37.598  15.803  1.00 24.43
ATOM   13180  CB   GLN  1962      36.404 -36.613  14.644  1.00 25.79
ATOM   13181  CG   GLN  1962      36.228 -35.174  15.095  1.00 28.89
ATOM   13182  CD   GLN  1962      37.400 -34.677  15.912  1.00 31.20
ATOM   13183  OE1  GLN  1962      38.524 -34.600  15.419  1.00 31.16
ATOM   13184  NE2  GLN  1962      37.144 -34.339  17.172  1.00 32.91
ATOM   13185  C    GLN  1962      35.295 -37.556  16.678  1.00 22.32
ATOM   13186  O    GLN  1962      35.267 -36.860  17.691  1.00 20.87
ATOM   13187  N    LEU  1963      34.258 -38.294  16.285  1.00 21.33
ATOM   13188  CA   LEU  1963      33.032 -38.323  17.068  1.00 21.71
ATOM   13189  CB   LEU  1963      31.900 -39.012  16.293  1.00 22.46
ATOM   13190  CG   LEU  1963      31.338 -38.237  15.092  1.00 28.54
ATOM   13191  CD1  LEU  1963      30.208 -39.027  14.450  1.00 28.46
ATOM   13192  CD2  LEU  1963      30.822 -36.868  15.550  1.00 27.56
ATOM   13193  C    LEU  1963      33.274 -39.044  18.392  1.00 20.51
ATOM   13194  O    LEU  1963      32.745 -38.641  19.425  1.00 18.17
ATOM   13195  N    LEU  1964      34.074 -40.109  18.359  1.00 19.90
```

```
ATOM   13196  CA   LEU  1964      34.387 -40.860  19.573  1.00 18.82
ATOM   13197  CB   LEU  1964      35.293 -42.060  19.258  1.00 19.20
ATOM   13198  CG   LEU  1964      35.150 -43.326  20.114  1.00 22.73
ATOM   13199  CD1  LEU  1964      36.408 -44.170  19.984  1.00 21.26
ATOM   13200  CD2  LEU  1964      34.908 -42.985  21.568  1.00 21.92
ATOM   13201  C    LEU  1964      35.125 -39.916  20.513  1.00 18.01
ATOM   13202  O    LEU  1964      34.827 -39.843  21.704  1.00 16.75
ATOM   13203  N    SER  1965      36.097 -39.197  19.958  1.00 19.21
ATOM   13204  CA   SER  1965      36.891 -38.251  20.726  1.00 18.88
ATOM   13205  CB   SER  1965      37.939 -37.586  19.834  1.00 19.39
ATOM   13206  OG   SER  1965      38.736 -36.691  20.592  1.00 21.10
ATOM   13207  C    SER  1965      36.017 -37.179  21.354  1.00 17.02
ATOM   13208  O    SER  1965      36.122 -36.915  22.550  1.00 15.35
ATOM   13209  N    ASP  1966      35.156 -36.558  20.549  1.00 16.60
ATOM   13210  CA   ASP  1966      34.278 -35.509  21.071  1.00 17.92
ATOM   13211  CB   ASP  1966      33.404 -34.910  19.964  1.00 18.63
ATOM   13212  CG   ASP  1966      34.197 -34.078  18.974  1.00 19.16
ATOM   13213  OD1  ASP  1966      35.254 -33.536  19.352  1.00 24.28
ATOM   13214  OD2  ASP  1966      33.745 -33.954  17.819  1.00 20.44
ATOM   13215  C    ASP  1966      33.378 -36.061  22.170  1.00 15.95
ATOM   13216  O    ASP  1966      33.162 -35.409  23.194  1.00 15.58
ATOM   13217  N    ALA  1967      32.852 -37.263  21.955  1.00 15.46
ATOM   13218  CA   ALA  1967      31.980 -37.889  22.946  1.00 13.99
ATOM   13219  CB   ALA  1967      31.536 -39.264  22.454  1.00 13.81
ATOM   13220  C    ALA  1967      32.703 -38.012  24.280  1.00 14.10
ATOM   13221  O    ALA  1967      32.157 -37.674  25.333  1.00 14.44
ATOM   13222  N    LEU  1968      33.944 -38.490  24.240  1.00 13.09
ATOM   13223  CA   LEU  1968      34.724 -38.650  25.463  1.00 13.85
ATOM   13224  CB   LEU  1968      36.010 -39.434  25.164  1.00 14.52
ATOM   13225  CG   LEU  1968      35.805 -40.946  24.954  1.00 14.84
ATOM   13226  CD1  LEU  1968      37.006 -41.547  24.234  1.00 16.18
ATOM   13227  CD2  LEU  1968      35.599 -41.618  26.306  1.00 17.51
ATOM   13228  C    LEU  1968      35.062 -37.293  26.088  1.00 13.86
ATOM   13229  O    LEU  1968      35.056 -37.157  27.309  1.00 14.68
ATOM   13230  N    ALA  1969      35.342 -36.290  25.257  1.00 14.00
ATOM   13231  CA   ALA  1969      35.672 -34.957  25.769  1.00 14.01
ATOM   13232  CB   ALA  1969      36.150 -34.057  24.634  1.00 14.15
ATOM   13233  C    ALA  1969      34.468 -34.325  26.462  1.00 13.52
ATOM   13234  O    ALA  1969      34.609 -33.634  27.476  1.00 12.39
ATOM   13235  N    LEU  1970      33.283 -34.552  25.909  1.00 15.34
ATOM   13236  CA   LEU  1970      32.060 -34.005  26.502  1.00 14.25
ATOM   13237  CB   LEU  1970      30.869 -34.220  25.563  1.00 15.21
ATOM   13238  CG   LEU  1970      30.929 -33.394  24.272  1.00 16.66
ATOM   13239  CD1  LEU  1970      29.795 -33.811  23.329  1.00 17.51
ATOM   13240  CD2  LEU  1970      30.815 -31.913  24.610  1.00 16.43
ATOM   13241  C    LEU  1970      31.806 -34.661  27.848  1.00 13.96
ATOM   13242  O    LEU  1970      31.474 -33.982  28.824  1.00 12.41
ATOM   13243  N    GLU  1971      31.981 -35.980  27.907  1.00 12.89
ATOM   13244  CA   GLU  1971      31.787 -36.705  29.162  1.00 14.56
ATOM   13245  CB   GLU  1971      31.951 -38.224  28.945  1.00 16.29
ATOM   13246  CG   GLU  1971      31.840 -39.074  30.226  1.00 15.90
ATOM   13247  CD   GLU  1971      32.114 -40.557  29.981  1.00 15.83
ATOM   13248  OE1  GLU  1971      33.169 -40.888  29.415  1.00 18.88
ATOM   13249  OE2  GLU  1971      31.279 -41.392  30.358  1.00 19.45
ATOM   13250  C    GLU  1971      32.805 -36.207  30.195  1.00 15.16
ATOM   13251  O    GLU  1971      32.465 -35.965  31.353  1.00 13.13
ATOM   13252  N    ALA  1972      34.055 -36.039  29.774  1.00 14.67
ATOM   13253  CA   ALA  1972      35.087 -35.589  30.695  1.00 15.71
ATOM   13254  CB   ALA  1972      36.465 -35.643  30.015  1.00 15.78
ATOM   13255  C    ALA  1972      34.802 -34.181  31.192  1.00 15.67
ATOM   13256  O    ALA  1972      35.151 -33.832  32.323  1.00 17.06
ATOM   13257  N    ALA  1973      34.167 -33.377  30.342  1.00 16.83
ATOM   13258  CA   ALA  1973      33.826 -31.993  30.673  1.00 16.03
ATOM   13259  CB   ALA  1973      33.434 -31.243  29.399  1.00 17.16
ATOM   13260  C    ALA  1973      32.690 -31.924  31.694  1.00 16.25
ATOM   13261  O    ALA  1973      32.499 -30.900  32.354  1.00 16.68
ATOM   13262  N    GLY  1974      31.939 -33.013  31.824  1.00 15.27
ATOM   13263  CA   GLY  1974      30.857 -33.037  32.790  1.00 15.24
ATOM   13264  C    GLY  1974      29.473 -33.342  32.251  1.00 13.22
ATOM   13265  O    GLY  1974      28.498 -33.327  33.008  1.00 13.69
ATOM   13266  N    ALA  1975      29.357 -33.606  30.954  1.00 13.87
ATOM   13267  CA   ALA  1975      28.038 -33.927  30.396  1.00 12.92
ATOM   13268  CB   ALA  1975      28.126 -34.066  28.888  1.00 12.07
ATOM   13269  C    ALA  1975      27.581 -35.243  31.031  1.00 12.54
ATOM   13270  O    ALA  1975      28.364 -36.188  31.104  1.00 11.18
ATOM   13271  N    GLN  1976      26.330 -35.304  31.492  1.00 11.89
ATOM   13272  CA   GLN  1976      25.803 -36.514  32.132  1.00 11.40
```

```
ATOM   13273  CB   GLN  1976      25.009 -36.150   33.387   1.00 12.41
ATOM   13274  CG   GLN  1976      25.890 -35.701   34.561   1.00 15.82
ATOM   13275  CD   GLN  1976      25.091 -35.135   35.720   1.00 16.62
ATOM   13276  OE1  GLN  1976      24.747 -35.845   36.671   1.00 21.24
ATOM   13277  NE2  GLN  1976      24.784 -33.847   35.641   1.00 14.90
ATOM   13278  C    GLN  1976      24.931 -37.348   31.196   1.00 11.43
ATOM   13279  O    GLN  1976      24.407 -38.397   31.581   1.00 11.61
ATOM   13280  N    LEU  1977      24.780 -36.862   29.970   1.00 10.84
ATOM   13281  CA   LEU  1977      23.986 -37.533   28.957   1.00 12.72
ATOM   13282  CB   LEU  1977      22.510 -37.145   29.089   1.00 15.93
ATOM   13283  CG   LEU  1977      21.602 -38.134   29.806   1.00 21.02
ATOM   13284  CD1  LEU  1977      20.255 -37.461   30.072   1.00 21.00
ATOM   13285  CD2  LEU  1977      21.419 -39.379   28.955   1.00 23.10
ATOM   13286  C    LEU  1977      24.476 -37.130   27.588   1.00 11.33
ATOM   13287  O    LEU  1977      25.024 -36.050   27.414   1.00 12.24
ATOM   13288  N    LEU  1978      24.253 -38.004   26.614   1.00 11.93
ATOM   13289  CA   LEU  1978      24.673 -37.739   25.247   1.00 12.10
ATOM   13290  CB   LEU  1978      26.066 -38.341   25.001   1.00 13.29
ATOM   13291  CG   LEU  1978      26.488 -38.431   23.533   1.00 16.13
ATOM   13292  CD1  LEU  1978      26.589 -37.031   22.943   1.00 16.64
ATOM   13293  CD2  LEU  1978      27.819 -39.159   23.422   1.00 12.84
ATOM   13294  C    LEU  1978      23.688 -38.311   24.238   1.00 12.27
ATOM   13295  O    LEU  1978      23.223 -39.445   24.374   1.00 13.09
ATOM   13296  N    VAL  1979      23.356 -37.503   23.239   1.00 11.61
ATOM   13297  CA   VAL  1979      22.456 -37.911   22.159   1.00 10.55
ATOM   13298  CB   VAL  1979      21.370 -36.815   21.854   1.00 10.14
ATOM   13299  CG1  VAL  1979      20.708 -37.068   20.492   1.00 10.01
ATOM   13300  CG2  VAL  1979      20.321 -36.812   22.935   1.00  9.21
ATOM   13301  C    VAL  1979      23.333 -38.099   20.926   1.00 12.11
ATOM   13302  O    VAL  1979      24.206 -37.274   20.637   1.00 13.15
ATOM   13303  N    LEU  1980      23.119 -39.216   20.238   1.00 12.53
ATOM   13304  CA   LEU  1980      23.829 -39.547   19.009   1.00 14.61
ATOM   13305  CB   LEU  1980      24.510 -40.913   19.103   1.00 16.21
ATOM   13306  CG   LEU  1980      25.859 -41.049   19.799   1.00 21.32
ATOM   13307  CD1  LEU  1980      26.338 -42.498   19.648   1.00 17.71
ATOM   13308  CD2  LEU  1980      26.877 -40.094   19.170   1.00 18.47
ATOM   13309  C    LEU  1980      22.747 -39.616   17.946   1.00 15.13
ATOM   13310  O    LEU  1980      21.812 -40.411   18.060   1.00 12.67
ATOM   13311  N    GLU  1981      22.880 -38.786   16.916   1.00 14.35
ATOM   13312  CA   GLU  1981      21.897 -38.726   15.851   1.00 17.03
ATOM   13313  CB   GLU  1981      21.298 -37.314   15.799   1.00 15.90
ATOM   13314  CG   GLU  1981      20.445 -37.013   14.584   1.00 20.75
ATOM   13315  CD   GLU  1981      19.621 -35.740   14.747   1.00 23.90
ATOM   13316  OE1  GLU  1981      20.106 -34.784   15.389   1.00 25.09
ATOM   13317  OE2  GLU  1981      18.492 -35.692   14.221   1.00 26.95
ATOM   13318  C    GLU  1981      22.424 -39.120   14.479   1.00 17.13
ATOM   13319  O    GLU  1981      23.429 -38.590   14.007   1.00 18.47
ATOM   13320  N    CYS  1982      21.733 -40.065   13.849   1.00 17.94
ATOM   13321  CA   CYS  1982      22.080 -40.532   12.513   1.00 19.05
ATOM   13322  CB   CYS  1982      21.599 -39.505   11.489   1.00 18.86
ATOM   13323  SG   CYS  1982      19.782 -39.350   11.492   1.00 25.27
ATOM   13324  C    CYS  1982      23.554 -40.847   12.313   1.00 20.26
ATOM   13325  O    CYS  1982      24.276 -40.134   11.616   1.00 21.64
ATOM   13326  N    VAL  1983      23.980 -41.947   12.920   1.00 21.57
ATOM   13327  CA   VAL  1983      25.359 -42.399   12.844   1.00 22.20
ATOM   13328  CB   VAL  1983      26.087 -42.075   14.172   1.00 23.68
ATOM   13329  CG1  VAL  1983      25.549 -42.952   15.287   1.00 24.53
ATOM   13330  CG2  VAL  1983      27.573 -42.253   14.021   1.00 26.35
ATOM   13331  C    VAL  1983      25.351 -43.913   12.614   1.00 21.11
ATOM   13332  O    VAL  1983      24.415 -44.605   13.011   1.00 19.74
ATOM   13333  N    PRO  1984      26.382 -44.450   11.945   1.00 21.78
ATOM   13334  CD   PRO  1984      27.550 -43.820   11.312   1.00 23.46
ATOM   13335  CA   PRO  1984      26.390 -45.898   11.724   1.00 20.82
ATOM   13336  CB   PRO  1984      27.718 -46.130   10.992   1.00 23.68
ATOM   13337  CG   PRO  1984      28.555 -44.935   11.367   1.00 24.78
ATOM   13338  C    PRO  1984      26.296 -46.663   13.043   1.00 18.82
ATOM   13339  O    PRO  1984      26.897 -46.268   14.040   1.00 18.80
ATOM   13340  N    VAL  1985      25.536 -47.753   13.038   1.00 18.79
ATOM   13341  CA   VAL  1985      25.336 -48.578   14.225   1.00 19.02
ATOM   13342  CB   VAL  1985      24.558 -49.873   13.874   1.00 20.60
ATOM   13343  CG1  VAL  1985      24.312 -50.691   15.122   1.00 20.17
ATOM   13344  CG2  VAL  1985      23.236 -49.524   13.214   1.00 17.11
ATOM   13345  C    VAL  1985      26.634 -48.980   14.909   1.00 20.44
ATOM   13346  O    VAL  1985      26.732 -48.931   16.136   1.00 19.37
ATOM   13347  N    GLU  1986      27.630 -49.383   14.122   1.00 20.52
ATOM   13348  CA   GLU  1986      28.907 -49.800   14.692   1.00 21.16
ATOM   13349  CB   GLU  1986      29.858 -50.322   13.605   1.00 23.66
```

```
ATOM   13350  CG   GLU  1986      29.427 -50.073  12.168  1.00 30.18
ATOM   13351  CD   GLU  1986      28.118 -50.765  11.822  1.00 31.01
ATOM   13352  OE1  GLU  1986      27.968 -51.957  12.162  1.00 34.03
ATOM   13353  OE2  GLU  1986      27.251 -50.116  11.207  1.00 32.54
ATOM   13354  C    GLU  1986      29.578 -48.667  15.458  1.00 19.79
ATOM   13355  O    GLU  1986      30.215 -48.904  16.486  1.00 20.21
ATOM   13356  N    LEU  1987      29.435 -47.440  14.959  1.00 19.82
ATOM   13357  CA   LEU  1987      30.032 -46.288  15.629  1.00 19.57
ATOM   13358  CB   LEU  1987      29.973 -45.039  14.743  1.00 21.80
ATOM   13359  CG   LEU  1987      31.137 -44.044  14.841  1.00 24.62
ATOM   13360  CD1  LEU  1987      30.711 -42.719  14.230  1.00 24.77
ATOM   13361  CD2  LEU  1987      31.567 -43.849  16.275  1.00 27.37
ATOM   13362  C    LEU  1987      29.278 -46.015  16.930  1.00 19.16
ATOM   13363  O    LEU  1987      29.883 -45.704  17.957  1.00 19.07
ATOM   13364  N    ALA  1988      27.954 -46.129  16.879  1.00 17.69
ATOM   13365  CA   ALA  1988      27.123 -45.908  18.056  1.00 16.77
ATOM   13366  CB   ALA  1988      25.645 -46.063  17.695  1.00 18.29
ATOM   13367  C    ALA  1988      27.510 -46.919  19.131  1.00 17.28
ATOM   13368  O    ALA  1988      27.506 -46.608  20.329  1.00 15.24
ATOM   13369  N    LYS  1989      27.846 -48.130  18.692  1.00 18.47
ATOM   13370  CA   LYS  1989      28.263 -49.203  19.598  1.00 20.98
ATOM   13371  CB   LYS  1989      28.561 -50.493  18.821  1.00 25.15
ATOM   13372  CG   LYS  1989      27.483 -50.977  17.875  1.00 30.44
ATOM   13373  CD   LYS  1989      27.979 -52.169  17.038  1.00 33.35
ATOM   13374  CE   LYS  1989      26.964 -52.561  15.968  1.00 34.91
ATOM   13375  NZ   LYS  1989      27.496 -53.556  15.000  1.00 37.47
ATOM   13376  C    LYS  1989      29.551 -48.784  20.300  1.00 19.44
ATOM   13377  O    LYS  1989      29.656 -48.853  21.523  1.00 20.34
ATOM   13378  N    ARG  1990      30.530 -48.361  19.503  1.00 18.82
ATOM   13379  CA   ARG  1990      31.833 -47.951  20.017  1.00 18.71
ATOM   13380  CB   ARG  1990      32.735 -47.459  18.872  1.00 23.33
ATOM   13381  CG   ARG  1990      34.237 -47.609  19.159  1.00 28.11
ATOM   13382  CD   ARG  1990      35.120 -46.751  18.249  1.00 31.00
ATOM   13383  NE   ARG  1990      34.739 -46.823  16.841  1.00 33.95
ATOM   13384  CZ   ARG  1990      35.335 -46.132  15.871  1.00 34.97
ATOM   13385  NH1  ARG  1990      36.345 -45.320  16.155  1.00 34.80
ATOM   13386  NH2  ARG  1990      34.910 -46.239  14.619  1.00 35.67
ATOM   13387  C    ARG  1990      31.691 -46.848  21.058  1.00 17.38
ATOM   13388  O    ARG  1990      32.299 -46.901  22.125  1.00 16.41
ATOM   13389  N    ILE  1991      30.878 -45.847  20.744  1.00 15.72
ATOM   13390  CA   ILE  1991      30.660 -44.718  21.647  1.00 14.45
ATOM   13391  CB   ILE  1991      29.908 -43.586  20.897  1.00 13.43
ATOM   13392  CG2  ILE  1991      29.506 -42.468  21.887  1.00 15.10
ATOM   13393  CG1  ILE  1991      30.797 -43.074  19.767  1.00 13.76
ATOM   13394  CD1  ILE  1991      30.233 -41.892  18.986  1.00 15.99
ATOM   13395  C    ILE  1991      29.916 -45.087  22.933  1.00 13.45
ATOM   13396  O    ILE  1991      30.302 -44.674  24.029  1.00 14.39
ATOM   13397  N    THR  1992      28.856 -45.877  22.799  1.00 13.96
ATOM   13398  CA   THR  1992      28.083 -46.288  23.964  1.00 13.15
ATOM   13399  CB   THR  1992      26.814 -47.044  23.547  1.00 13.12
ATOM   13400  OG1  THR  1992      26.016 -46.196  22.708  1.00 13.87
ATOM   13401  CG2  THR  1992      25.991 -47.432  24.779  1.00 12.06
ATOM   13402  C    THR  1992      28.897 -47.153  24.922  1.00 16.80
ATOM   13403  O    THR  1992      28.761 -47.043  26.142  1.00 15.55
ATOM   13404  N    GLU  1993      29.755 -48.007  24.375  1.00 18.05
ATOM   13405  CA   GLU  1993      30.576 -48.869  25.219  1.00 19.12
ATOM   13406  CB   GLU  1993      31.088 -50.069  24.413  1.00 21.19
ATOM   13407  CG   GLU  1993      29.992 -50.833  23.681  1.00 26.97
ATOM   13408  CD   GLU  1993      30.495 -52.105  23.018  1.00 29.74
ATOM   13409  OE1  GLU  1993      31.684 -52.156  22.646  1.00 32.85
ATOM   13410  OE2  GLU  1993      29.695 -53.050  22.856  1.00 31.62
ATOM   13411  C    GLU  1993      31.761 -48.077  25.783  1.00 19.25
ATOM   13412  O    GLU  1993      32.323 -48.440  26.814  1.00 20.28
ATOM   13413  N    ALA  1994      32.130 -46.989  25.115  1.00 17.41
ATOM   13414  CA   ALA  1994      33.252 -46.178  25.564  1.00 18.10
ATOM   13415  CB   ALA  1994      33.820 -45.383  24.398  1.00 18.09
ATOM   13416  C    ALA  1994      32.888 -45.234  26.703  1.00 18.12
ATOM   13417  O    ALA  1994      33.716 -44.928  27.565  1.00 19.20
ATOM   13418  N    LEU  1995      31.645 -44.770  26.708  1.00 17.31
ATOM   13419  CA   LEU  1995      31.192 -43.841  27.741  1.00 17.19
ATOM   13420  CB   LEU  1995      30.222 -42.821  27.145  1.00 17.68
ATOM   13421  CG   LEU  1995      30.754 -41.776  26.173  1.00 18.73
ATOM   13422  CD1  LEU  1995      29.641 -40.764  25.924  1.00 12.73
ATOM   13423  CD2  LEU  1995      31.976 -41.083  26.718  1.00 24.11
ATOM   13424  C    LEU  1995      30.514 -44.507  28.924  1.00 15.56
ATOM   13425  O    LEU  1995      29.807 -45.496  28.766  1.00 17.28
ATOM   13426  N    ALA  1996      30.739 -43.942  30.106  1.00 15.73
```

```
ATOM   13427  CA   ALA  1996      30.128 -44.435  31.324  1.00 15.27
ATOM   13428  CB   ALA  1996      30.946 -44.020  32.541  1.00 15.65
ATOM   13429  C    ALA  1996      28.727 -43.836  31.402  1.00 14.70
ATOM   13430  O    ALA  1996      27.795 -44.485  31.871  1.00 14.43
ATOM   13431  N    ILE  1997      28.575 -42.595  30.934  1.00 14.99
ATOM   13432  CA   ILE  1997      27.266 -41.939  30.946  1.00 13.59
ATOM   13433  CB   ILE  1997      27.372 -40.419  30.633  1.00 13.71
ATOM   13434  CG2  ILE  1997      28.184 -39.710  31.721  1.00 10.02
ATOM   13435  CG1  ILE  1997      27.993 -40.211  29.249  1.00 11.88
ATOM   13436  CD1  ILE  1997      28.068 -38.736  28.834  1.00 13.96
ATOM   13437  C    ILE  1997      26.337 -42.565  29.909  1.00 12.60
ATOM   13438  O    ILE  1997      26.786 -43.173  28.935  1.00 12.53
ATOM   13439  N    PRO  1998      25.018 -42.431  30.111  1.00 13.25
ATOM   13440  CD   PRO  1998      24.297 -41.930  31.296  1.00 10.70
ATOM   13441  CA   PRO  1998      24.106 -43.019  29.128  1.00 12.65
ATOM   13442  CB   PRO  1998      22.745 -42.952  29.824  1.00 13.84
ATOM   13443  CG   PRO  1998      22.895 -41.813  30.788  1.00 18.97
ATOM   13444  C    PRO  1998      24.117 -42.292  27.784  1.00 12.72
ATOM   13445  O    PRO  1998      24.340 -41.081  27.718  1.00 12.80
ATOM   13446  N    VAL  1999      23.890 -43.053  26.721  1.00 11.68
ATOM   13447  CA   VAL  1999      23.850 -42.507  25.376  1.00 13.14
ATOM   13448  CB   VAL  1999      24.972 -43.123  24.507  1.00 14.39
ATOM   13449  CG1  VAL  1999      24.829 -42.664  23.061  1.00 13.88
ATOM   13450  CG2  VAL  1999      26.338 -42.685  25.062  1.00 13.61
ATOM   13451  C    VAL  1999      22.483 -42.815  24.784  1.00 12.68
ATOM   13452  O    VAL  1999      22.064 -43.969  24.753  1.00 11.67
ATOM   13453  N    ILE  2000      21.788 -41.768  24.346  1.00 12.00
ATOM   13454  CA   ILE  2000      20.449 -41.870  23.772  1.00 10.42
ATOM   13455  CB   ILE  2000      19.527 -40.764  24.362  1.00 11.32
ATOM   13456  CG2  ILE  2000      18.190 -40.765  23.645  1.00 14.54
ATOM   13457  CG1  ILE  2000      19.350 -40.977  25.869  1.00 12.67
ATOM   13458  CD1  ILE  2000      18.671 -39.808  26.580  1.00 14.64
ATOM   13459  C    ILE  2000      20.562 -41.667  22.265  1.00 11.37
ATOM   13460  O    ILE  2000      21.140 -40.682  21.814  1.00 12.18
ATOM   13461  N    GLY  2001      20.021 -42.595  21.486  1.00  9.93
ATOM   13462  CA   GLY  2001      20.124 -42.462  20.048  1.00 10.42
ATOM   13463  C    GLY  2001      18.845 -42.223  19.274  1.00 10.95
ATOM   13464  O    GLY  2001      17.735 -42.486  19.742  1.00 10.35
ATOM   13465  N    ILE  2002      19.024 -41.667  18.085  1.00 12.38
ATOM   13466  CA   ILE  2002      17.945 -41.430  17.149  1.00 12.82
ATOM   13467  CB   ILE  2002      17.347 -39.975  17.254  1.00 15.11
ATOM   13468  CG2  ILE  2002      18.439 -38.929  17.272  1.00 17.13
ATOM   13469  CG1  ILE  2002      16.384 -39.726  16.101  1.00 16.48
ATOM   13470  CD1  ILE  2002      15.206 -40.620  16.103  1.00 21.78
ATOM   13471  C    ILE  2002      18.652 -41.700  15.832  1.00 14.25
ATOM   13472  O    ILE  2002      19.612 -41.019  15.465  1.00 14.32
ATOM   13473  N    GLY  2003      18.202 -42.745  15.145  1.00 13.78
ATOM   13474  CA   GLY  2003      18.839 -43.124  13.902  1.00 13.18
ATOM   13475  C    GLY  2003      20.243 -43.651  14.160  1.00 13.92
ATOM   13476  O    GLY  2003      21.108 -43.548  13.293  1.00 16.63
ATOM   13477  N    ALA  2004      20.485 -44.208  15.347  1.00 14.85
ATOM   13478  CA   ALA  2004      21.803 -44.758  15.677  1.00 15.30
ATOM   13479  CB   ALA  2004      22.427 -43.972  16.832  1.00 16.97
ATOM   13480  C    ALA  2004      21.732 -46.247  16.031  1.00 15.54
ATOM   13481  O    ALA  2004      22.688 -46.814  16.565  1.00 18.51
ATOM   13482  N    GLY  2005      20.598 -46.880  15.741  1.00 16.16
ATOM   13483  CA   GLY  2005      20.448 -48.302  16.033  1.00 14.60
ATOM   13484  C    GLY  2005      20.079 -48.614  17.473  1.00 15.86
ATOM   13485  O    GLY  2005      20.022 -47.717  18.311  1.00 16.19
ATOM   13486  N    ASN  2006      19.843 -49.891  17.773  1.00 14.74
ATOM   13487  CA   ASN  2006      19.454 -50.290  19.130  1.00 14.82
ATOM   13488  CB   ASN  2006      18.552 -51.530  19.083  1.00 14.04
ATOM   13489  CG   ASN  2006      19.300 -52.803  18.712  1.00 12.52
ATOM   13490  OD1  ASN  2006      18.768 -53.901  18.870  1.00 16.70
ATOM   13491  ND2  ASN  2006      20.521 -52.668  18.222  1.00 12.06
ATOM   13492  C    ASN  2006      20.610 -50.548  20.094  1.00 14.16
ATOM   13493  O    ASN  2006      20.403 -51.082  21.183  1.00 15.13
ATOM   13494  N    VAL  2007      21.817 -50.153  19.703  1.00 14.84
ATOM   13495  CA   VAL  2007      23.002 -50.358  20.534  1.00 16.00
ATOM   13496  CB   VAL  2007      24.277 -50.349  19.677  1.00 18.48
ATOM   13497  CG1  VAL  2007      25.448 -50.869  20.490  1.00 25.46
ATOM   13498  CG2  VAL  2007      24.073 -51.178  18.421  1.00 22.41
ATOM   13499  C    VAL  2007      23.167 -49.310  21.639  1.00 16.08
ATOM   13500  O    VAL  2007      23.970 -49.486  22.557  1.00 14.39
ATOM   13501  N    THR  2008      22.418 -48.215  21.549  1.00 13.91
ATOM   13502  CA   THR  2008      22.509 -47.158  22.557  1.00 13.64
ATOM   13503  CB   THR  2008      21.997 -45.809  21.980  1.00 12.91
```

```
ATOM  13504  OG1 THR  2008    20.692 -45.980  21.412  1.00 13.88
ATOM  13505  CG2 THR  2008    22.941 -45.303  20.901  1.00 14.51
ATOM  13506  C   THR  2008    21.743 -47.523  23.839  1.00 13.63
ATOM  13507  O   THR  2008    20.956 -48.470  23.847  1.00 15.42
ATOM  13508  N   ASP  2009    21.993 -46.796  24.925  1.00 13.00
ATOM  13509  CA  ASP  2009    21.329 -47.071  26.205  1.00 12.92
ATOM  13510  CB  ASP  2009    22.064 -46.350  27.337  1.00 13.27
ATOM  13511  CG  ASP  2009    23.552 -46.681  27.365  1.00 14.17
ATOM  13512  OD1 ASP  2009    23.898 -47.849  27.650  1.00 15.47
ATOM  13513  OD2 ASP  2009    24.362 -45.779  27.093  1.00 14.16
ATOM  13514  C   ASP  2009    19.859 -46.652  26.208  1.00 13.92
ATOM  13515  O   ASP  2009    19.035 -47.205  26.943  1.00 14.59
ATOM  13516  N   GLY  2010    19.542 -45.658  25.387  1.00 14.50
ATOM  13517  CA  GLY  2010    18.173 -45.181  25.300  1.00 13.29
ATOM  13518  C   GLY  2010    17.829 -44.764  23.878  1.00 11.32
ATOM  13519  O   GLY  2010    18.700 -44.728  23.008  1.00 11.26
ATOM  13520  N   GLN  2011    16.562 -44.437  23.644  1.00 11.11
ATOM  13521  CA  GLN  2011    16.095 -44.032  22.325  1.00 10.95
ATOM  13522  CB  GLN  2011    15.215 -45.121  21.706  1.00 12.17
ATOM  13523  CG  GLN  2011    15.926 -46.426  21.378  1.00 10.38
ATOM  13524  CD  GLN  2011    16.987 -46.262  20.303  1.00  9.79
ATOM  13525  OE1 GLN  2011    16.812 -45.508  19.344  1.00 12.91
ATOM  13526  NE2 GLN  2011    18.086 -46.986  20.445  1.00 12.26
ATOM  13527  C   GLN  2011    15.254 -42.775  22.417  1.00 11.93
ATOM  13528  O   GLN  2011    14.646 -42.495  23.451  1.00  9.84
ATOM  13529  N   ILE  2012    15.208 -42.023  21.327  1.00 13.12
ATOM  13530  CA  ILE  2012    14.384 -40.835  21.307  1.00 16.32
ATOM  13531  CB  ILE  2012    15.228 -39.563  21.592  1.00 20.21
ATOM  13532  CG2 ILE  2012    16.164 -39.278  20.451  1.00 19.95
ATOM  13533  CG1 ILE  2012    14.302 -38.372  21.851  1.00 22.75
ATOM  13534  CD1 ILE  2012    14.955 -37.275  22.672  1.00 20.84
ATOM  13535  C   ILE  2012    13.700 -40.764  19.951  1.00 18.75
ATOM  13536  O   ILE  2012    14.243 -41.208  18.939  1.00 17.43
ATOM  13537  N   LEU  2013    12.479 -40.250  19.942  1.00 19.42
ATOM  13538  CA  LEU  2013    11.746 -40.110  18.700  1.00 23.65
ATOM  13539  CB  LEU  2013    10.914 -41.356  18.419  1.00 26.87
ATOM  13540  CG  LEU  2013    11.228 -42.102  17.114  1.00 28.56
ATOM  13541  CD1 LEU  2013    10.179 -43.189  16.952  1.00 27.78
ATOM  13542  CD2 LEU  2013    11.206 -41.148  15.900  1.00 28.97
ATOM  13543  C   LEU  2013    10.835 -38.903  18.751  1.00 24.10
ATOM  13544  O   LEU  2013    10.387 -38.489  19.830  1.00 19.94
ATOM  13545  N   VAL  2014    10.588 -38.337  17.573  1.00 23.42
ATOM  13546  CA  VAL  2014     9.714 -37.186  17.420  1.00 22.95
ATOM  13547  CB  VAL  2014     9.892 -36.500  16.039  1.00 25.08
ATOM  13548  CG1 VAL  2014     8.905 -35.340  15.907  1.00 25.84
ATOM  13549  CG2 VAL  2014    11.312 -35.989  15.898  1.00 29.40
ATOM  13550  C   VAL  2014     8.310 -37.732  17.499  1.00 19.50
ATOM  13551  O   VAL  2014     7.917 -38.578  16.688  1.00 17.37
ATOM  13552  N   MET  2015     7.563 -37.258  18.488  1.00 16.88
ATOM  13553  CA  MET  2015     6.199 -37.712  18.687  1.00 15.75
ATOM  13554  CB  MET  2015     5.567 -37.024  19.913  1.00 13.34
ATOM  13555  CG  MET  2015     5.461 -35.519  19.841  1.00 14.95
ATOM  13556  SD  MET  2015     3.933 -34.982  20.657  1.00 14.22
ATOM  13557  CE  MET  2015     2.778 -35.272  19.370  1.00 13.27
ATOM  13558  C   MET  2015     5.340 -37.485  17.451  1.00 15.30
ATOM  13559  O   MET  2015     4.460 -38.288  17.150  1.00 16.99
ATOM  13560  N   HIS  2016     5.602 -36.411  16.714  1.00 12.72
ATOM  13561  CA  HIS  2016     4.804 -36.144  15.527  1.00 15.08
ATOM  13562  CB  HIS  2016     5.115 -34.739  15.005  1.00 15.69
ATOM  13563  CG  HIS  2016     4.605 -33.664  15.915  1.00 14.26
ATOM  13564  CD2 HIS  2016     5.132 -33.129  17.043  1.00 11.38
ATOM  13565  ND1 HIS  2016     3.330 -33.146  15.808  1.00 15.21
ATOM  13566  CE1 HIS  2016     3.092 -32.345  16.833  1.00 13.82
ATOM  13567  NE2 HIS  2016     4.170 -32.318  17.598  1.00 16.57
ATOM  13568  C   HIS  2016     4.989 -37.221  14.462  1.00 16.85
ATOM  13569  O   HIS  2016     4.085 -37.462  13.658  1.00 17.99
ATOM  13570  N   ASP  2017     6.143 -37.883  14.455  1.00 17.44
ATOM  13571  CA  ASP  2017     6.359 -38.967  13.495  1.00 22.03
ATOM  13572  CB  ASP  2017     7.850 -39.142  13.177  1.00 23.41
ATOM  13573  CG  ASP  2017     8.440 -37.954  12.431  1.00 27.95
ATOM  13574  OD1 ASP  2017     7.857 -37.548  11.409  1.00 27.29
ATOM  13575  OD2 ASP  2017     9.488 -37.442  12.873  1.00 26.63
ATOM  13576  C   ASP  2017     5.817 -40.278  14.079  1.00 21.90
ATOM  13577  O   ASP  2017     5.254 -41.105  13.357  1.00 23.38
ATOM  13578  N   ALA  2018     5.986 -40.454  15.388  1.00 22.26
ATOM  13579  CA  ALA  2018     5.538 -41.661  16.083  1.00 22.32
ATOM  13580  CB  ALA  2018     5.940 -41.585  17.559  1.00 23.61
```

```
ATOM   13581  C    ALA  2018      4.037 -41.923  15.959  1.00 24.21
ATOM   13582  O    ALA  2018      3.597 -43.064  16.085  1.00 25.32
ATOM   13583  N    PHE  2019      3.255 -40.871  15.711  1.00 21.91
ATOM   13584  CA   PHE  2019      1.807 -41.011  15.561  1.00 22.15
ATOM   13585  CB   PHE  2019      1.080 -40.151  16.596  1.00 23.71
ATOM   13586  CG   PHE  2019      1.580 -40.355  17.999  1.00 24.13
ATOM   13587  CD1  PHE  2019      1.717 -41.638  18.516  1.00 24.21
ATOM   13588  CD2  PHE  2019      1.935 -39.271  18.795  1.00 25.21
ATOM   13589  CE1  PHE  2019      2.207 -41.843  19.807  1.00 25.08
ATOM   13590  CE2  PHE  2019      2.426 -39.463  20.091  1.00 25.89
ATOM   13591  CZ   PHE  2019      2.561 -40.752  20.593  1.00 26.24
ATOM   13592  C    PHE  2019      1.329 -40.637  14.155  1.00 21.96
ATOM   13593  O    PHE  2019      0.156 -40.325  13.947  1.00 22.51
ATOM   13594  N    GLY  2020      2.243 -40.658  13.194  1.00 23.05
ATOM   13595  CA   GLY  2020      1.879 -40.328  11.829  1.00 24.29
ATOM   13596  C    GLY  2020      1.192 -38.985  11.660  1.00 23.30
ATOM   13597  O    GLY  2020      0.433 -38.791  10.706  1.00 24.31
ATOM   13598  N    ILE  2021      1.445 -38.049  12.570  1.00 22.12
ATOM   13599  CA   ILE  2021      0.822 -36.731  12.466  1.00 19.93
ATOM   13600  CB   ILE  2021      0.976 -35.919  13.792  1.00 18.55
ATOM   13601  CG2  ILE  2021      0.483 -34.500  13.595  1.00 18.65
ATOM   13602  CG1  ILE  2021      0.168 -36.590  14.912  1.00 17.73
ATOM   13603  CD1  ILE  2021      0.485 -36.084  16.319  1.00 15.80
ATOM   13604  C    ILE  2021      1.447 -35.961  11.300  1.00 20.77
ATOM   13605  O    ILE  2021      0.738 -35.348  10.502  1.00 18.99
ATOM   13606  N    THR  2022      2.771 -36.008  11.194  1.00 22.40
ATOM   13607  CA   THR  2022      3.473 -35.313  10.120  1.00 25.87
ATOM   13608  CB   THR  2022      4.985 -35.269  10.385  1.00 27.00
ATOM   13609  OG1  THR  2022      5.517 -36.600  10.373  1.00 32.73
ATOM   13610  CG2  THR  2022      5.262 -34.641  11.735  1.00 26.74
ATOM   13611  C    THR  2022      3.240 -35.978   8.765  1.00 27.71
ATOM   13612  O    THR  2022      3.208 -37.208   8.663  1.00 26.18
ATOM   13613  N    GLY  2023      3.078 -35.147   7.738  1.00 29.75
ATOM   13614  CA   GLY  2023      2.854 -35.620   6.381  1.00 36.68
ATOM   13615  C    GLY  2023      2.624 -37.111   6.213  1.00 40.05
ATOM   13616  O    GLY  2023      1.665 -37.666   6.754  1.00 41.97
ATOM   13617  N    GLY  2024      3.503 -37.765   5.458  1.00 41.61
ATOM   13618  CA   GLY  2024      3.364 -39.194   5.240  1.00 43.00
ATOM   13619  C    GLY  2024      4.675 -39.899   4.961  1.00 43.33
ATOM   13620  O    GLY  2024      4.750 -41.125   5.012  1.00 44.64
ATOM   13621  N    HIS  2025      5.712 -39.125   4.664  1.00 42.93
ATOM   13622  CA   HIS  2025      7.031 -39.680   4.374  1.00 42.66
ATOM   13623  CB   HIS  2025      7.622 -38.976   3.151  1.00 46.48
ATOM   13624  CG   HIS  2025      7.432 -37.489   3.161  1.00 50.68
ATOM   13625  CD2  HIS  2025.     6.729 -36.676   2.337  1.00 52.17
ATOM   13626  ND1  HIS  2025      8.001 -36.669   4.112  1.00 52.20
ATOM   13627  CE1  HIS  2025      7.660 -35.415   3.872  1.00 52.74
ATOM   13628  NE2  HIS  2025      6.888 -35.392   2.801  1.00 53.69
ATOM   13629  C    HIS  2025      7.983 -39.548   5.563  1.00 39.08
ATOM   13630  O    HIS  2025      8.882 -38.709   5.552  1.00 38.93
ATOM   13631  N    ILE  2026      7.790 -40.381   6.582  1.00 35.71
ATOM   13632  CA   ILE  2026      8.638 -40.330   7.771  1.00 32.13
ATOM   13633  CB   ILE  2026      8.040 -41.148   8.927  1.00 33.92
ATOM   13634  CG2  ILE  2026      6.670 -40.599   9.305  1.00 35.60
ATOM   13635  CG1  ILE  2026      7.952 -42.620   8.522  1.00 33.22
ATOM   13636  CD1  ILE  2026      7.704 -43.554   9.685  1.00 34.59
ATOM   13637  C    ILE  2026     10.045 -40.857   7.509  1.00 27.67
ATOM   13638  O    ILE  2026     10.252 -41.720   6.652  1.00 27.84
ATOM   13639  N    PRO  2027     11.035 -40.346   8.256  1.00 25.23
ATOM   13640  CD   PRO  2027     10.945 -39.349   9.333  1.00 23.72
ATOM   13641  CA   PRO  2027     12.417 -40.793   8.075  1.00 23.00
ATOM   13642  CB   PRO  2027     13.189 -39.972   9.111  1.00 24.44
ATOM   13643  CG   PRO  2027     12.159 -39.676  10.159  1.00 26.02
ATOM   13644  C    PRO  2027     12.596 -42.299   8.266  1.00 21.46
ATOM   13645  O    PRO  2027     11.814 -42.950   8.964  1.00 18.01
ATOM   13646  N    LYS  2028     13.638 -42.840   7.642  1.00 21.15
ATOM   13647  CA   LYS  2028     13.928 -44.266   7.722  1.00 22.60
ATOM   13648  CB   LYS  2028     15.189 -44.607   6.914  1.00 25.69
ATOM   13649  CG   LYS  2028     14.946 -44.928   5.441  1.00 33.29
ATOM   13650  CD   LYS  2028     14.455 -43.717   4.653  1.00 36.85
ATOM   13651  CE   LYS  2028     14.326 -44.047   3.170  1.00 40.01
ATOM   13652  NZ   LYS  2028     14.001 -42.848   2.343  1.00 41.13
ATOM   13653  C    LYS  2028     14.109 -44.767   9.146  1.00 20.12
ATOM   13654  O    LYS  2028     13.751 -45.901   9.448  1.00 19.79
ATOM   13655  N    PHE  2029     14.656 -43.926  10.020  1.00 18.98
ATOM   13656  CA   PHE  2029     14.904 -44.337  11.400  1.00 17.08
ATOM   13657  CB   PHE  2029     16.031 -43.494  11.994  1.00 16.61
```

```
ATOM  13658  CG  PHE  2029     15.756 -42.027  11.973  1.00 18.88
ATOM  13659  CD1 PHE  2029     14.872 -41.459  12.882  1.00 18.51
ATOM  13660  CD2 PHE  2029     16.353 -41.211  11.014  1.00 18.71
ATOM  13661  CE1 PHE  2029     14.585 -40.097  12.842  1.00 19.42
ATOM  13662  CE2 PHE  2029     16.072 -39.846  10.961  1.00 19.33
ATOM  13663  CZ  PHE  2029     15.187 -39.288  11.875  1.00 19.51
ATOM  13664  C   PHE  2029     13.683 -44.279  12.313  1.00 14.56
ATOM  13665  O   PHE  2029     13.732 -44.765  13.435  1.00 12.75
ATOM  13666  N   ALA  2030     12.587 -43.706  11.822  1.00 13.77
ATOM  13667  CA  ALA  2030     11.374 -43.579  12.615  1.00 13.91
ATOM  13668  CB  ALA  2030     10.752 -42.221  12.387  1.00 14.25
ATOM  13669  C   ALA  2030     10.336 -44.661  12.345  1.00 15.51
ATOM  13670  O   ALA  2030     10.415 -45.389  11.356  1.00 14.24
ATOM  13671  N   LYS  2031      9.360 -44.751  13.243  1.00 13.26
ATOM  13672  CA  LYS  2031      8.287 -45.713  13.122  1.00 13.53
ATOM  13673  CB  LYS  2031      8.599 -46.980  13.924  1.00 13.73
ATOM  13674  CG  LYS  2031      7.469 -48.008  13.894  1.00 13.98
ATOM  13675  CD  LYS  2031      7.871 -49.321  14.566  1.00 15.44
ATOM  13676  CE  LYS  2031      6.659 -50.206  14.782  1.00 17.20
ATOM  13677  NZ  LYS  2031      7.004 -51.532  15.354  1.00 18.85
ATOM  13678  C   LYS  2031      6.996 -45.096  13.625  1.00 13.24
ATOM  13679  O   LYS  2031      6.981 -44.383  14.633  1.00 12.44
ATOM  13680  N   ASN  2032      5.915 -45.359  12.900  1.00 13.87
ATOM  13681  CA  ASN  2032      4.594 -44.866  13.272  1.00 14.13
ATOM  13682  CB  ASN  2032      3.746 -44.625  12.015  1.00 15.58
ATOM  13683  CG  ASN  2032      2.318 -44.218  12.336  1.00 17.14
ATOM  13684  OD1 ASN  2032      1.846 -44.384  13.465  1.00 18.37
ATOM  13685  ND2 ASN  2032      1.614 -43.699  11.338  1.00 15.68
ATOM  13686  C   ASN  2032      3.964 -45.964  14.124  1.00 14.09
ATOM  13687  O   ASN  2032      3.512 -46.987  13.594  1.00 13.04
ATOM  13688  N   PHE  2033      3.955 -45.760  15.435  1.00 11.21
ATOM  13689  CA  PHE  2033      3.382 -46.733  16.370  1.00 13.08
ATOM  13690  CB  PHE  2033      3.967 -46.540  17.778  1.00 13.19
ATOM  13691  CG  PHE  2033      5.412 -46.946  17.888  1.00 13.28
ATOM  13692  CD1 PHE  2033      6.430 -46.051  17.569  1.00 13.02
ATOM  13693  CD2 PHE  2033      5.754 -48.254  18.240  1.00 12.37
ATOM  13694  CE1 PHE  2033      7.773 -46.446  17.587  1.00 14.04
ATOM  13695  CE2 PHE  2033      7.091 -48.663  18.262  1.00 11.80
ATOM  13696  CZ  PHE  2033      8.106 -47.756  17.934  1.00 12.01
ATOM  13697  C   PHE  2033      1.864 -46.643  16.421  1.00 14.14
ATOM  13698  O   PHE  2033      1.183 -47.603  16.788  1.00 15.64
ATOM  13699  N   LEU  2034      1.315 -45.493  16.054  1.00 13.12
ATOM  13700  CA  LEU  2034     -0.135 -45.372  16.075  1.00 14.61
ATOM  13701  CB  LEU  2034     -0.566 -43.933  15.780  1.00 15.30
ATOM  13702  CG  LEU  2034     -2.088 -43.744  15.737  1.00 15.00
ATOM  13703  CD1 LEU  2034     -2.712 -44.235  17.047  1.00 17.20
ATOM  13704  CD2 LEU  2034     -2.419 -42.283  15.484  1.00 15.32
ATOM  13705  C   LEU  2034     -0.741 -46.331  15.039  1.00 16.57
ATOM  13706  O   LEU  2034     -1.736 -47.004  15.313  1.00 14.84
ATOM  13707  N   ALA  2035     -0.132 -46.390  13.858  1.00 20.33
ATOM  13708  CA  ALA  2035     -0.603 -47.266  12.783  1.00 27.79
ATOM  13709  CB  ALA  2035      0.385 -47.238  11.614  1.00 29.37
ATOM  13710  C   ALA  2035     -0.790 -48.700  13.269  1.00 33.38
ATOM  13711  O   ALA  2035     -1.530 -49.483  12.664  1.00 36.55
ATOM  13712  N   GLU  2036     -0.117 -49.036  14.366  1.00 37.14
ATOM  13713  CA  GLU  2036     -0.194 -50.373  14.954  1.00 41.95
ATOM  13714  CB  GLU  2036      0.893 -50.541  16.026  1.00 42.91
ATOM  13715  CG  GLU  2036      2.290 -50.150  15.573  1.00 47.48
ATOM  13716  CD  GLU  2036      2.844 -51.058  14.493  1.00 49.09
ATOM  13717  OE1 GLU  2036      3.892 -50.704  13.909  1.00 50.73
ATOM  13718  OE2 GLU  2036      2.240 -52.125  14.231  1.00 51.86
ATOM  13719  C   GLU  2036     -1.561 -50.605  15.591  1.00 43.11
ATOM  13720  O   GLU  2036     -1.915 -51.740  15.916  1.00 44.60
ATOM  13721  N   THR  2037     -2.313 -49.520  15.770  1.00 43.75
ATOM  13722  CA  THR  2037     -3.647 -49.569  16.372  1.00 43.51
ATOM  13723  CB  THR  2037     -3.554 -49.742  17.894  1.00 44.86
ATOM  13724  OG1 THR  2037     -4.872 -49.832  18.452  1.00 46.90
ATOM  13725  CG2 THR  2037     -2.821 -48.567  18.513  1.00 47.17
ATOM  13726  C   THR  2037     -4.422 -48.283  16.075  1.00 41.90
ATOM  13727  O   THR  2037     -4.206 -47.644  15.046  1.00 43.72
ATOM  13728  N   GLY  2038     -5.330 -47.916  16.976  1.00 38.86
ATOM  13729  CA  GLY  2038     -6.107 -46.700  16.809  1.00 32.91
ATOM  13730  C   GLY  2038     -6.187 -45.946  18.123  1.00 29.01
ATOM  13731  O   GLY  2038     -7.129 -45.193  18.383  1.00 29.97
ATOM  13732  N   ASP  2039     -5.184 -46.157  18.964  1.00 23.77
ATOM  13733  CA  ASP  2039     -5.134 -45.510  20.271  1.00 19.97
ATOM  13734  CB  ASP  2039     -5.582 -46.503  21.353  1.00 23.10
```

```
ATOM   13735  CG  ASP  2039     -5.458 -45.935  22.755  1.00 26.45
ATOM   13736  OD1 ASP  2039     -4.352 -45.993  23.316  1.00 25.80
ATOM   13737  OD2 ASP  2039     -6.466 -45.412  23.284  1.00 33.68
ATOM   13738  C   ASP  2039     -3.709 -45.026  20.528  1.00 15.18
ATOM   13739  O   ASP  2039     -2.770 -45.814  20.510  1.00 11.93
ATOM   13740  N   ILE  2040     -3.562 -43.725  20.762  1.00 14.13
ATOM   13741  CA  ILE  2040     -2.256 -43.121  20.989  1.00 12.51
ATOM   13742  CB  ILE  2040     -2.379 -41.579  21.053  1.00 12.90
ATOM   13743  CG2 ILE  2040     -1.046 -40.954  21.421  1.00 12.00
ATOM   13744  CG1 ILE  2040     -2.842 -41.052  19.689  1.00 13.88
ATOM   13745  CD1 ILE  2040     -3.192 -39.555  19.673  1.00 14.99
ATOM   13746  C   ILE  2040     -1.544 -43.645  22.234  1.00 12.95
ATOM   13747  O   ILE  2040     -0.336 -43.838  22.214  1.00 13.26
ATOM   13748  N   ARG  2041     -2.280 -43.881  23.312  1.00 11.80
ATOM   13749  CA  ARG  2041     -1.657 -44.390  24.520  1.00 13.04
ATOM   13750  CB  ARG  2041     -2.667 -44.389  25.660  1.00 13.92
ATOM   13751  CG  ARG  2041     -2.981 -42.985  26.125  1.00 14.21
ATOM   13752  CD  ARG  2041     -4.050 -42.968  27.178  1.00 16.52
ATOM   13753  NE  ARG  2041     -4.194 -41.629  27.733  1.00 14.95
ATOM   13754  CZ  ARG  2041     -4.651 -40.579  27.057  1.00 18.50
ATOM   13755  NH1 ARG  2041     -5.024 -40.700  25.791  1.00 14.68
ATOM   13756  NH2 ARG  2041     -4.728 -39.397  27.646  1.00 17.59
ATOM   13757  C   ARG  2041     -1.113 -45.793  24.264  1.00 12.55
ATOM   13758  O   ARG  2041     -0.026 -46.143  24.729  1.00 11.32
ATOM   13759  N   ALA  2042     -1.862 -46.598  23.515  1.00 12.58
ATOM   13760  CA  ALA  2042     -1.405 -47.946  23.186  1.00 13.09
ATOM   13761  CB  ALA  2042     -2.481 -48.698  22.387  1.00 13.73
ATOM   13762  C   ALA  2042     -0.115 -47.838  22.368  1.00 12.86
ATOM   13763  O   ALA  2042      0.823 -48.625  22.554  1.00 13.69
ATOM   13764  N   ALA  2043     -0.068 -46.862  21.462  1.00 11.53
ATOM   13765  CA  ALA  2043      1.121 -46.648  20.629  1.00 11.50
ATOM   13766  CB  ALA  2043      0.863 -45.552  19.605  1.00 10.75
ATOM   13767  C   ALA  2043      2.322 -46.277  21.491  1.00 10.66
ATOM   13768  O   ALA  2043      3.439 -46.727  21.235  1.00 12.15
ATOM   13769  N   VAL  2044      2.093 -45.449  22.505  1.00  9.56
ATOM   13770  CA  VAL  2044      3.166 -45.060  23.410  1.00  9.69
ATOM   13771  CB  VAL  2044      2.684 -43.988  24.419  1.00 11.94
ATOM   13772  CG1 VAL  2044      3.702 -43.828  25.536  1.00 11.70
ATOM  ·13773  CG2 VAL  2044      2.506 -42.656  23.694  1.00  9.79
ATOM   13774  C   VAL  2044      3.695 -46.278  24.163  1.00 11.89
ATOM   13775  O   VAL  2044      4.910 -46.478  24.268  1.00 11.33
ATOM   13776  N   ARG  2045      2.782 -47.101  24.672  1.00 10.73
ATOM   13777  CA  ARG  2045      3.178 -48.301  25.409  1.00 12.45
ATOM   13778  CB  ARG  2045      1.939 -49.016  25.956  1.00 11.81
ATOM   13779  CG  ARG  2045      1.325 -48.297  27.150  1.00 15.71
ATOM   13780  CD  ARG  2045      0.359 -49.185  27.908  1.00 17.80
ATOM   13781  NE  ARG  2045     -0.791 -49.608  27.115  1.00 18.46
ATOM   13782  CZ  ARG  2045     -1.866 -48.862  26.874  1.00 19.90
ATOM   13783  NH1 ARG  2045     -1.955 -47.632  27.360  1.00 18.74
ATOM   13784  NH2 ARG  2045     -2.874 -49.358  26.165  1.00 17.78
ATOM   13785  C   ARG  2045      3.986 -49.265  24.547  1.00 11.67
ATOM   13786  O   ARG  2045      4.925 -49.897  25.031  1.00 13.65
ATOM   13787  N   GLN  2046      3.604 -49.373  23.278  1.00 11.60
ATOM   13788  CA  GLN  2046      4.279 -50.255  22.343  1.00 13.89
ATOM   13789  CB  GLN  2046      3.503 -50.340  21.027  1.00 15.05
ATOM   13790  CG  GLN  2046      4.052 -51.389  20.066  1.00 17.14
ATOM   13791  CD  GLN  2046      3.320 -51.419  18.737  1.00 21.49
ATOM   13792  OE1 GLN  2046      2.098 -51.286  18.687  1.00 24.59
ATOM   13793  NE2 GLN  2046      4.063 -51.607  17.656  1.00 23.02
ATOM   13794  C   GLN  2046      5.682 -49.742  22.071  1.00 14.22
ATOM   13795  O   GLN  2046      6.624 -50.523  21.932  1.00 13.87
ATOM   13796  N   TYR  2047      5.821 -48.424  21.982  1.00 12.66
ATOM   13797  CA  TYR  2047      7.136 -47.834  21.740  1.00 13.34
ATOM   13798  CB  TYR  2047      6.993 -46.321  21.552  1.00 12.45
ATOM   13799  CG  TYR  2047      8.285 -45.548  21.643  1.00 13.33
ATOM   13800  CD1 TYR  2047      9.397 -45.883  20.855  1.00 12.66
ATOM   13801  CE1 TYR  2047     10.582 -45.148  20.940  1.00 15.89
ATOM   13802  CD2 TYR  2047      8.392 -44.469  22.510  1.00 12.07
ATOM   13803  CE2 TYR  2047      9.557 -43.735  22.601  1.00 14.07
ATOM   13804  CZ  TYR  2047     10.649 -44.068  21.824  1.00 14.94
ATOM   13805  OH  TYR  2047     11.805 -43.318  21.929  1.00 16.90
ATOM   13806  C   TYR  2047      8.030 -48.163  22.939  1.00 12.59
ATOM   13807  O   TYR  2047      9.145 -48.661  22.784  1.00 10.64
ATOM   13808  N   MET  2048      7.522 -47.896  24.139  1.00 12.77
ATOM   13809  CA  MET  2048      8.266 -48.190  25.361  1.00 13.01
ATOM   13810  CB  MET  2048      7.394 -47.907  26.595  1.00 14.40
ATOM   13811  CG  MET  2048      7.101 -46.434  26.842  1.00 14.98
```

```
ATOM   13812  SD   MET   2048       5.856 -46.160  28.106  1.00 18.28
ATOM   13813  CE   MET   2048       6.752 -46.711  29.577  1.00 18.21
ATOM   13814  C    MET   2048       8.730 -49.647  25.400  1.00 14.55
ATOM   13815  O    MET   2048       9.907 -49.941  25.652  1.00 11.07
ATOM   13816  N    ALA   2049       7.793 -50.561  25.163  1.00 13.04
ATOM   13817  CA   ALA   2049       8.096 -51.988  25.182  1.00 14.89
ATOM   13818  CB   ALA   2049       6.798 -52.799  24.992  1.00 14.38
ATOM   13819  C    ALA   2049       9.128 -52.385  24.130  1.00 15.06
ATOM   13820  O    ALA   2049      10.043 -53.163  24.414  1.00 14.34
ATOM   13821  N    GLU   2050       9.008 -51.849  22.916  1.00 12.60
ATOM   13822  CA   GLU   2050       9.963 -52.224  21.869  1.00 13.77
ATOM   13823  CB   GLU   2050       9.461 -51.778  20.480  1.00 10.52
ATOM   13824  CG   GLU   2050       8.388 -52.697  19.915  1.00 12.90
ATOM   13825  CD   GLU   2050       7.895 -52.284  18.544  1.00 14.19
ATOM   13826  OE1  GLU   2050       8.707 -51.760  17.752  1.00 14.22
ATOM   13827  OE2  GLU   2050       6.695 -52.502  18.255  1.00 13.57
ATOM   13828  C    GLU   2050      11.361 -51.689  22.145  1.00 14.61
ATOM   13829  O    GLU   2050      12.354 -52.322  21.790  1.00 12.04
ATOM   13830  N    VAL   2051      11.453 -50.528  22.783  1.00 14.04
ATOM   13831  CA   VAL   2051      12.774 -49.999  23.088  1.00 12.24
ATOM   13832  CB   VAL   2051      12.701 -48.552  23.589  1.00 12.65
ATOM   13833  CG1  VAL   2051      14.041 -48.153  24.216  1.00 12.32
ATOM   13834  CG2  VAL   2051      12.361 -47.621  22.427  1.00 10.30
ATOM   13835  C    VAL   2051      13.434 -50.866  24.159  1.00 12.70
ATOM   13836  O    VAL   2051      14.618 -51.203  24.063  1.00 14.76
ATOM   13837  N    GLU   2052      12.666 -51.232  25.177  1.00 12.67
ATOM   13838  CA   GLU   2052      13.198 -52.051  26.267  1.00 13.06
ATOM   13839  CB   GLU   2052      12.177 -52.152  27.405  1.00 17.19
ATOM   13840  CG   GLU   2052      12.650 -52.976  28.597  1.00 22.09
ATOM   13841  CD   GLU   2052      11.791 -52.760  29.836  1.00 27.02
ATOM   13842  OE1  GLU   2052      11.779 -53.647  30.714  1.00 29.74
ATOM   13843  OE2  GLU   2052      11.135 -51.702  29.940  1.00 27.52
ATOM   13844  C    GLU   2052      13.610 -53.446  25.809  1.00 15.04
ATOM   13845  O    GLU   2052      14.600 -54.006  26.299  1.00 12.91
ATOM   13846  N    SER   2053      12.866 -54.005  24.862  1.00 14.34
ATOM   13847  CA   SER   2053      13.176 -55.336  24.349  1.00 16.44
ATOM   13848  CB   SER   2053      11.939 -55.945  23.689  1.00 17.92
ATOM   13849  OG   SER   2053      10.960 -56.242  24.665  1.00 29.42
ATOM   13850  C    SER   2053      14.306 -55.292  23.337  1.00 16.59
ATOM   13851  O    SER   2053      14.868 -56.326  22.994  1.00 16.54
ATOM   13852  N    GLY   2054      14.632 -54.096  22.856  1.00 14.35
ATOM   13853  CA   GLY   2054      15.695 -53.961  21.877  1.00 14.92
ATOM   13854  C    GLY   2054      15.168 -54.137  20.464  1.00 14.49
ATOM   13855  O    GLY   2054      15.930 -54.058  19.503  1.00 14.84
ATOM   13856  N    VAL   2055      13.862 -54.379  20.347  1.00 13.75
ATOM   13857  CA   VAL   2055      13.181 -54.582  19.061  1.00 16.33
ATOM   13858  CB   VAL   2055      11.704 -55.006  19.312  1.00 19.13
ATOM   13859  CG1  VAL   2055      10.824 -54.610  18.157  1.00 24.52
ATOM   13860  CG2  VAL   2055      11.640 -56.508  19.561  1.00 22.18
ATOM   13861  C    VAL   2055      13.203 -53.333  18.181  1.00 15.78
ATOM   13862  O    VAL   2055      13.299 -53.420  16.953  1.00 14.79
ATOM   13863  N    TYR   2056      13.077 -52.177  18.823  1.00 13.64
ATOM   13864  CA   TYR   2056      13.105 -50.895  18.121  1.00 14.23
ATOM   13865  CB   TYR   2056      11.816 -50.108  18.336  1.00 14.11
ATOM   13866  CG   TYR   2056      11.878 -48.760  17.647  1.00 13.46
ATOM   13867  CD1  TYR   2056      11.680 -48.653  16.270  1.00 14.58
ATOM   13868  CE1  TYR   2056      11.857 -47.443  15.605  1.00 13.65
ATOM   13869  CD2  TYR   2056      12.248 -47.614  18.349  1.00 11.87
ATOM   13870  CE2  TYR   2056      12.430 -46.397  17.696  1.00 13.86
ATOM   13871  CZ   TYR   2056      12.234 -46.323  16.326  1.00 14.29
ATOM   13872  OH   TYR   2056      12.432 -45.134  15.671  1.00 14.14
ATOM   13873  C    TYR   2056      14.266 -50.086  18.691  1.00 13.20
ATOM   13874  O    TYR   2056      14.412 -49.991  19.901  1.00 13.24
ATOM   13875  N    PRO   2057      15.092 -49.477  17.825  1.00 15.12
ATOM   13876  CD   PRO   2057      16.137 -48.516  18.218  1.00 16.15
ATOM   13877  CA   PRO   2057      14.952 -49.547  16.371  1.00 15.54
ATOM   13878  CB   PRO   2057      15.799 -48.374  15.880  1.00 18.49
ATOM   13879  CG   PRO   2057      16.865 -48.270  16.917  1.00 17.17
ATOM   13880  C    PRO   2057      15.378 -50.876  15.763  1.00 17.76
ATOM   13881  O    PRO   2057      16.236 -51.580  16.301  1.00 16.91
ATOM   13882  N    GLY   2058      14.745 -51.223  14.646  1.00 16.96
ATOM   13883  CA   GLY   2058      15.069 -52.457  13.951  1.00 18.25
ATOM   13884  C    GLY   2058      16.151 -52.181  12.932  1.00 19.23
ATOM   13885  O    GLY   2058      16.593 -51.039  12.776  1.00 17.91
ATOM   13886  N    GLU   2059      16.590 -53.220  12.234  1.00 18.48
ATOM   13887  CA   GLU   2059      17.627 -53.048  11.225  1.00 19.82
ATOM   13888  CB   GLU   2059      17.963 -54.396  10.572  1.00 22.37
```

```
ATOM   13889  CG   GLU  2059      19.024 -54.287   9.491  1.00 25.19
ATOM   13890  CD   GLU  2059      20.374 -53.864  10.050  1.00 26.27
ATOM   13891  OE1  GLU  2059      21.173 -53.288   9.285  1.00 28.76
ATOM   13892  OE2  GLU  2059      20.637 -54.117  11.246  1.00 24.77
ATOM   13893  C    GLU  2059      17.193 -52.054  10.151  1.00 17.71
ATOM   13894  O    GLU  2059      18.007 -51.273   9.657  1.00 16.86
ATOM   13895  N    GLU  2060      15.909 -52.078   9.797  1.00 18.39
ATOM   13896  CA   GLU  2060      15.388 -51.179   8.764  1.00 19.58
ATOM   13897  CB   GLU  2060      13.936 -51.506   8.433  1.00 23.58
ATOM   13898  CG   GLU  2060      13.569 -52.954   8.501  1.00 29.46
ATOM   13899  CD   GLU  2060      12.479 -53.188   9.527  1.00 30.54
ATOM   13900  OE1  GLU  2060      11.392 -52.590   9.370  1.00 31.23
ATOM   13901  OE2  GLU  2060      12.724 -53.954  10.484  1.00 34.44
ATOM   13902  C    GLU  2060      15.443 -49.723   9.197  1.00 18.24
ATOM   13903  O    GLU  2060      15.340 -48.828   8.363  1.00 18.32
ATOM   13904  N    HIS  2061      15.592 -49.495  10.499  1.00 17.85
ATOM   13905  CA   HIS  2061      15.646 -48.138  11.050  1.00 15.77
ATOM   13906  CB   HIS  2061      14.890 -48.075  12.374  1.00 15.70
ATOM   13907  CG   HIS  2061      13.485 -48.573  12.296  1.00 13.96
ATOM   13908  CD2  HIS  2061      12.870 -49.609  12.912  1.00 11.61
ATOM   13909  ND1  HIS  2061      12.526 -47.964  11.518  1.00 14.67
ATOM   13910  CE1  HIS  2061      11.378 -48.601  11.660  1.00 12.03
ATOM   13911  NE2  HIS  2061      11.559 -49.603  12.500  1.00 17.48
ATOM   13912  C    HIS  2061      17.074 -47.702  11.324  1.00 16.96
ATOM   13913  O    HIS  2061      17.292 -46.639  11.899  1.00 16.77
ATOM   13914  N    SER  2062      18.040 -48.516  10.913  1.00 17.85
ATOM   13915  CA   SER  2062      19.449 -48.230  11.175  1.00 18.95
ATOM   13916  CB   SER  2062      20.056 -49.420  11.926  1.00 18.81
ATOM   13917  OG   SER  2062      19.261 -49.760  13.059  1.00 21.12
ATOM   13918  C    SER  2062      20.298 -47.917   9.941  1.00 21.62
ATOM   13919  O    SER  2062      19.945 -48.283   8.813  1.00 21.18
ATOM   13920  N    PHE  2063      21.423 -47.240  10.170  1.00 22.99
ATOM   13921  CA   PHE  2063      22.359 -46.870   9.099  1.00 26.28
ATOM   13922  CB   PHE  2063      22.600 -45.348   9.075  1.00 26.42
ATOM   13923  CG   PHE  2063      21.360 -44.526   8.820  1.00 29.55
ATOM   13924  CD1  PHE  2063      20.806 -43.746   9.835  1.00 31.06
ATOM   13925  CD2  PHE  2063      20.754 -44.519   7.568  1.00 29.76
ATOM   13926  CE1  PHE  2063      19.663 -42.974   9.607  1.00 30.50
ATOM   13927  CE2  PHE  2063      19.610 -43.750   7.328  1.00 31.05
ATOM   13928  CZ   PHE  2063      19.065 -42.976   8.350  1.00 29.87
ATOM   13929  C    PHE  2063      23.701 -47.577   9.301  1.00 26.42
ATOM   13930  O    PHE  2063      24.107 -47.849  10.432  1.00 22.96
ATOM   13931  N    HIS  2064      24.386 -47.867   8.199  1.00 28.64
ATOM   13932  CA   HIS  2064      25.687 -48.543   8.246  1.00 31.07
ATOM   13933  CB   HIS  2064      25.543 -49.996   7.789  1.00 31.23
ATOM   13934  CG   HIS  2064      24.784 -50.855   8.749  1.00 31.06
ATOM   13935  CD2  HIS  2064      23.523 -51.345   8.704  1.00 30.91
ATOM   13936  ND1  HIS  2064      25.320 -51.287   9.943  1.00 32.43
ATOM   13937  CE1  HIS  2064      24.423 -52.007  10.593  1.00 32.22
ATOM   13938  NE2  HIS  2064      23.323 -52.058   9.863  1.00 32.35
ATOM   13939  C    HIS  2064      26.729 -47.836   7.381  1.00 31.64
ATOM   13940  O    HIS  2064      27.892 -47.757   7.818  1.00 32.53
ATOM   13941  OXT  HIS  2064      26.375 -47.385   6.272  1.00 34.83
ATOM   13942  C1   KPL  2065      15.474 -35.267  17.263  1.00 36.48
ATOM   13943  C2   KPL  2065      16.103 -34.899  18.622  1.00 35.77
ATOM   13944  C3   KPL  2065      15.239 -35.486  19.739  1.00 36.51
ATOM   13945  C4   KPL  2065      17.519 -35.515  18.719  1.00 37.71
ATOM   13946  O1   KPL  2065      18.376 -35.011  17.682  1.00 42.74
ATOM   13947  C5   KPL  2065      16.164 -33.356  18.773  1.00 32.73
ATOM   13948  O2   KPL  2065      17.230 -32.800  18.938  1.00 31.75
ATOM   13949  C6   KPL  2065      14.923 -32.498  18.721  1.00 31.70
ATOM   13950  O3   KPL  2065      13.821 -33.000  18.568  1.00 31.03
ATOM   13951  O4   KPL  2065      15.041 -31.157  18.845  1.00 20.56
ATOM   13952  CB   MET  2101      22.414  -8.383  70.247  1.00 66.53
ATOM   13953  CG   MET  2101      22.617  -8.021  71.717  1.00 69.29
ATOM   13954  SD   MET  2101      22.027  -6.373  72.186  1.00 72.42
ATOM   13955  CE   MET  2101      23.584  -5.466  72.275  1.00 72.02
ATOM   13956  C    MET  2101      22.338  -6.232  68.953  1.00 62.58
ATOM   13957  O    MET  2101      21.157  -6.314  68.610  1.00 62.34
ATOM   13958  N    MET  2101      24.527  -7.178  69.751  1.00 64.37
ATOM   13959  CA   MET  2101      23.158  -7.490  69.244  1.00 64.28
ATOM   13960  N    LYS  2102      22.975  -5.073  69.085  1.00 60.08
ATOM   13961  CA   LYS  2102      22.317  -3.798  68.834  1.00 57.36
ATOM   13962  CB   LYS  2102      22.010  -3.086  70.157  1.00 58.35
ATOM   13963  CG   LYS  2102      20.762  -3.591  70.868  1.00 60.33
ATOM   13964  CD   LYS  2102      19.496  -3.202  70.117  1.00 61.31
ATOM   13965  CE   LYS  2102      19.296  -1.693  70.111  1.00 62.35
```

```
ATOM  13966  NZ   LYS  2102     18.073  -1.296  69.354  1.00 63.75
ATOM  13967  C    LYS  2102     23.179  -2.896  67.957  1.00 54.18
ATOM  13968  O    LYS  2102     23.678  -1.865  68.413  1.00 54.59
ATOM  13969  N    PRO  2103     23.371  -3.276  66.685  1.00 50.17
ATOM  13970  CD   PRO  2103     23.878  -2.346  65.660  1.00 49.96
ATOM  13971  CA   PRO  2103     22.830  -4.484  66.053  1.00 46.64
ATOM  13972  CB   PRO  2103     22.605  -4.032  64.620  1.00 47.38
ATOM  13973  CG   PRO  2103     23.802  -3.176  64.386  1.00 48.98
ATOM  13974  C    PRO  2103     23.794  -5.673  66.131  1.00 42.70
ATOM  13975  O    PRO  2103     24.924  -5.536  66.596  1.00 41.32
ATOM  13976  N    THR  2104     23.334  -6.832  65.667  1.00 38.31
ATOM  13977  CA   THR  2104     24.144  -8.045  65.662  1.00 35.00
ATOM  13978  CB   THR  2104     23.259  -9.309  65.701  1.00 35.04
ATOM  13979  OG1  THR  2104     22.442  -9.286  66.875  1.00 34.66
ATOM  13980  CG2  THR  2104     24.116 -10.561  65.714  1.00 34.54
ATOM  13981  C    THR  2104     24.981  -8.080  64.384  1.00 33.55
ATOM  13982  O    THR  2104     24.455  -7.872  63.291  1.00 31.34
ATOM  13983  N    THR  2105     26.279  -8.340  64.521  1.00 31.77
ATOM  13984  CA   THR  2105     27.172  -8.391  63.365  1.00 30.32
ATOM  13985  CB   THR  2105     28.127  -7.175  63.336  1.00 30.72
ATOM  13986  OG1  THR  2105     28.999  -7.223  64.471  1.00 32.36
ATOM  13987  CG2  THR  2105     27.338  -5.874  63.366  1.00 29.57
ATOM  13988  C    THR  2105     28.013  -9.664  63.355  1.00 29.36
ATOM  13989  O    THR  2105     27.945 -10.474  64.281  1.00 29.05
ATOM  13990  N    ILE  2106     28.798  -9.837  62.297  1.00 28.45
ATOM  13991  CA   ILE  2106     29.666 -11.004  62.162  1.00 28.68
ATOM  13992  CB   ILE  2106     30.529 -10.912  60.893  1.00 28.87
ATOM  13993  CG2  ILE  2106     31.287 -12.221  60.690  1.00 28.27
ATOM  13994  CG1  ILE  2106     29.639 -10.618  59.681  1.00 31.64
ATOM  13995  CD1  ILE  2106     30.409 -10.317  58.403  1.00 31.18
ATOM  13996  C    ILE  2106     30.599 -11.079  63.364  1.00 29.36
ATOM  13997  O    ILE  2106     30.944 -12.164  63.833  1.00 29.25
ATOM  13998  N    SER  2107     31.003  -9.912  63.854  1.00 29.55
ATOM  13999  CA   SER  2107     31.897  -9.820  65.002  1.00 30.81
ATOM  14000  CB   SER  2107     32.058  -8.358  65.425  1.00 31.74
ATOM  14001  OG   SER  2107     32.548  -7.568  64.361  1.00 34.72
ATOM  14002  C    SER  2107     31.363 -10.632  66.175  1.00 29.75
ATOM  14003  O    SER  2107     32.131 -11.245  66.904  1.00 29.24
ATOM  14004  N    LEU  2108     30.045 -10.630  66.348  1.00 29.42
ATOM  14005  CA   LEU  2108     29.419 -11.368  67.436  1.00 29.77
ATOM  14006  CB   LEU  2108     27.925 -11.045  67.512  1.00 30.86
ATOM  14007  CG   LEU  2108     27.356 -10.598  68.865  1.00 32.78
ATOM  14008  CD1  LEU  2108     25.830 -10.637  68.802  1.00 33.38
ATOM  14009  CD2  LEU  2108     27.851 -11.506  69.983  1.00 32.44
ATOM  14010  C    LEU  2108     29.601 -12.874  67.267  1.00 29.98
ATOM  14011  O    LEU  2108     29.949 -13.575  68.216  1.00 28.71
ATOM  14012  N    LEU  2109     29.366 -13.369  66.055  1.00 28.45
ATOM  14013  CA   LEU  2109     29.504 -14.795  65.783  1.00 28.96
ATOM  14014  CB   LEU  2109     29.031 -15.112  64.360  1.00 26.96
ATOM  14015  CG   LEU  2109     27.608 -14.653  63.997  1.00 26.16
ATOM  14016  CD1  LEU  2109     27.228 -15.201  62.628  1.00 24.61
ATOM  14017  CD2  LEU  2109     26.621 -15.140  65.046  1.00 23.92
ATOM  14018  C    LEU  2109     30.955 -15.232  65.962  1.00 30.20
ATOM  14019  O    LEU  2109     31.234 -16.329  66.455  1.00 27.70
ATOM  14020  N    GLN  2110     31.879 -14.366  65.563  1.00 32.67
ATOM  14021  CA   GLN  2110     33.299 -14.666  65.691  1.00 35.69
ATOM  14022  CB   GLN  2110     34.131 -13.556  65.041  1.00 37.71
ATOM  14023  CG   GLN  2110     35.596 -13.909  64.805  1.00 40.40
ATOM  14024  CD   GLN  2110     35.777 -15.115  63.894  1.00 41.71
ATOM  14025  OE1  GLN  2110     35.575 -16.259  64.303  1.00 42.12
ATOM  14026  NE2  GLN  2110     36.156 -14.858  62.645  1.00 42.57
ATOM  14027  C    GLN  2110     33.619 -14.778  67.179  1.00 37.51
ATOM  14028  O    GLN  2110     34.441 -15.595  67.588  1.00 39.31
ATOM  14029  N    LYS  2111     32.954 -13.956  67.987  1.00 38.46
ATOM  14030  CA   LYS  2111     33.157 -13.980  69.430  1.00 39.03
ATOM  14031  CB   LYS  2111     32.407 -12.824  70.098  1.00 41.13
ATOM  14032  CG   LYS  2111     32.493 -12.839  71.621  1.00 44.09
ATOM  14033  CD   LYS  2111     31.376 -12.035  72.275  1.00 45.16
ATOM  14034  CE   LYS  2111     31.450 -10.557  71.933  1.00 46.74
ATOM  14035  NZ   LYS  2111     30.408  -9.785  72.674  1.00 47.25
ATOM  14036  C    LYS  2111     32.637 -15.301  69.989  1.00 38.63
ATOM  14037  O    LYS  2111     33.282 -15.931  70.825  1.00 37.38
ATOM  14038  N    TYR  2112     31.463 -15.714  69.521  1.00 38.15
ATOM  14039  CA   TYR  2112     30.845 -16.959  69.970  1.00 37.96
ATOM  14040  CB   TYR  2112     29.506 -17.168  69.256  1.00 39.49
ATOM  14041  CG   TYR  2112     28.385 -16.279  69.755  1.00 41.55
ATOM  14042  CD1  TYR  2112     27.152 -16.250  69.101  1.00 42.17
```

```
ATOM  14043  CE1 TYR  2112      26.106 -15.461  69.569  1.00 43.58
ATOM  14044  CD2 TYR  2112      28.544 -15.488  70.897  1.00 42.83
ATOM  14045  CE2 TYR  2112      27.503 -14.695  71.374  1.00 43.95
ATOM  14046  CZ  TYR  2112      26.288 -14.687  70.707  1.00 44.41
ATOM  14047  OH  TYR  2112      25.256 -13.912  71.176  1.00 46.08
ATOM  14048  C   TYR  2112      31.725 -18.190  69.761  1.00 37.30
ATOM  14049  O   TYR  2112      31.765 -19.080  70.610  1.00 35.99
ATOM  14050  N   LYS  2113      32.417 -18.254  68.628  1.00 36.90
ATOM  14051  CA  LYS  2113      33.280 -19.400  68.362  1.00 38.21
ATOM  14052  CB  LYS  2113      33.784 -19.378  66.914  1.00 36.95
ATOM  14053  CG  LYS  2113      34.652 -20.579  66.560  1.00 34.27
ATOM  14054  CD  LYS  2113      34.828 -20.750  65.061  1.00 32.97
ATOM  14055  CE  LYS  2113      35.585 -22.041  64.761  1.00 32.84
ATOM  14056  NZ  LYS  2113      35.432 -22.499  63.348  1.00 30.32
ATOM  14057  C   LYS  2113      34.465 -19.411  69.328  1.00 38.99
ATOM  14058  O   LYS  2113      34.891 -20.471  69.782  1.00 38.16
ATOM  14059  N   GLN  2114      34.988 -18.229  69.639  1.00 40.94
ATOM  14060  CA  GLN  2114      36.116 -18.110  70.557  1.00 42.72
ATOM  14061  CB  GLN  2114      36.574 -16.653  70.652  1.00 44.16
ATOM  14062  CG  GLN  2114      37.245 -16.133  69.390  1.00 48.37
ATOM  14063  CD  GLN  2114      37.620 -14.663  69.486  1.00 51.00
ATOM  14064  OE1 GLN  2114      38.357 -14.254  70.386  1.00 53.01
ATOM  14065  NE2 GLN  2114      37.117 -13.861  68.551  1.00 51.71
ATOM  14066  C   GLN  2114      35.736 -18.617  71.942  1.00 42.63
ATOM  14067  O   GLN  2114      36.537 -19.263  72.616  1.00 42.99
ATOM  14068  N   GLU  2115      34.508 -18.320  72.358  1.00 42.51
ATOM  14069  CA  GLU  2115      34.016 -18.745  73.664  1.00 42.44
ATOM  14070  CB  GLU  2115      33.001 -17.736  74.207  1.00 44.97
ATOM  14071  CG  GLU  2115      33.467 -16.292  74.162  1.00 47.71
ATOM  14072  CD  GLU  2115      32.482 -15.348  74.816  1.00 49.87
ATOM  14073  OE1 GLU  2115      31.281 -15.405  74.472  1.00 50.50
ATOM  14074  OE2 GLU  2115      32.911 -14.545  75.674  1.00 52.16
ATOM  14075  C   GLU  2115      33.356 -20.114  73.558  1.00 40.83
ATOM  14076  O   GLU  2115      32.806 -20.624  74.532  1.00 40.15
ATOM  14077  N   LYS  2116      33.410 -20.701  72.368  1.00 39.34
ATOM  14078  CA  LYS  2116      32.819 -22.010  72.130  1.00 38.09
ATOM  14079  CB  LYS  2116      33.578 -23.079  72.923  1.00 40.37
ATOM  14080  CG  LYS  2116      35.049 -23.210  72.540  1.00 42.96
ATOM  14081  CD  LYS  2116      35.213 -23.602  71.075  1.00 45.90
ATOM  14082  CE  LYS  2116      36.679 -23.631  70.646  1.00 47.03
ATOM  14083  NZ  LYS  2116      37.471 -24.671  71.351  1.00 46.52
ATOM  14084  C   LYS  2116      31.332 -22.042  72.493  1.00 36.61
ATOM  14085  O   LYS  2116      30.836 -23.016  73.062  1.00 35.86
ATOM  14086  N   LYS  2117      30.620 -20.972  72.159  1.00 35.40
ATOM  14087  CA  LYS  2117      29.193 -20.908  72.444  1.00 33.94
ATOM  14088  CB  LYS  2117      28.838 -19.570  73.100  1.00 34.82
ATOM  14089  CG  LYS  2117      27.338 -19.354  73.271  1.00 36.44
ATOM  14090  CD  LYS  2117      27.039 -18.265  74.290  1.00 38.88
ATOM  14091  CE  LYS  2117      27.406 -18.729  75.695  1.00 39.51
ATOM  14092  NZ  LYS  2117      27.253 -17.658  76.714  1.00 41.13
ATOM  14093  C   LYS  2117      28.381 -21.107  71.166  1.00 32.80
ATOM  14094  O   LYS  2117      28.336 -20.232  70.300  1.00 31.72
ATOM  14095  N   ARG  2118      27.752 -22.274  71.060  1.00 30.34
ATOM  14096  CA  ARG  2118      26.938 -22.628  69.902  1.00 30.20
ATOM  14097  CB  ARG  2118      26.539 -24.105  69.984  1.00 30.53
ATOM  14098  CG  ARG  2118      27.675 -25.045  69.596  1.00 32.66
ATOM  14099  CD  ARG  2118      27.360 -26.506  69.872  1.00 33.98
ATOM  14100  NE  ARG  2118      27.573 -26.853  71.274  1.00 34.15
ATOM  14101  CZ  ARG  2118      27.601 -28.097  71.741  1.00 33.23
ATOM  14102  NH1 ARG  2118      27.427 -29.121  70.918  1.00 33.99
ATOM  14103  NH2 ARG  2118      27.816 -28.321  73.031  1.00 31.99
ATOM  14104  C   ARG  2118      25.703 -21.734  69.800  1.00 28.50
ATOM  14105  O   ARG  2118      24.919 -21.635  70.741  1.00 28.26
ATOM  14106  N   PHE  2119      25.546 -21.089  68.647  1.00 27.02
ATOM  14107  CA  PHE  2119      24.440 -20.171  68.403  1.00 25.78
ATOM  14108  CB  PHE  2119      25.002 -18.816  67.965  1.00 26.66
ATOM  14109  CG  PHE  2119      25.831 -18.883  66.710  1.00 28.65
ATOM  14110  CD1 PHE  2119      25.236 -18.742  65.457  1.00 27.88
ATOM  14111  CD2 PHE  2119      27.205 -19.110  66.779  1.00 27.56
ATOM  14112  CE1 PHE  2119      25.997 -18.821  64.294  1.00 29.01
ATOM  14113  CE2 PHE  2119      27.975 -19.192  65.624  1.00 28.48
ATOM  14114  CZ  PHE  2119      27.371 -19.047  64.377  1.00 29.61
ATOM  14115  C   PHE  2119      23.464 -20.693  67.351  1.00 24.24
ATOM  14116  O   PHE  2119      23.861 -21.375  66.404  1.00 20.96
ATOM  14117  N   ALA  2120      22.186 -20.365  67.515  1.00 23.46
ATOM  14118  CA  ALA  2120      21.162 -20.810  66.577  1.00 23.11
ATOM  14119  CB  ALA  2120      19.886 -21.175  67.343  1.00 25.46
```

```
ATOM   14120  C    ALA   2120      20.857 -19.756  65.510  1.00 22.49
ATOM   14121  O    ALA   2120      20.928 -18.553  65.765  1.00 20.69
ATOM   14122  N    THR   2121      20.529 -20.225  64.309  1.00 20.02
ATOM   14123  CA   THR   2121      20.198 -19.350  63.186  1.00 21.26
ATOM   14124  CB   THR   2121      21.324 -19.357  62.125  1.00 22.14
ATOM   14125  OG1  THR   2121      22.552 -18.930  62.734  1.00 27.92
ATOM   14126  CG2  THR   2121      20.987 -18.424  60.985  1.00 29.91
ATOM   14127  C    THR   2121      18.923 -19.922  62.577  1.00 17.16
ATOM   14128  O    THR   2121      18.651 -21.104  62.731  1.00 17.14
ATOM   14129  N    ILE   2122      18.139 -19.102  61.885  1.00 18.16
ATOM   14130  CA   ILE   2122      16.898 -19.608  61.308  1.00 16.98
ATOM   14131  CB   ILE   2122      15.737 -19.454  62.321  1.00 19.66
ATOM   14132  CG2  ILE   2122      15.365 -17.977  62.470  1.00 18.99
ATOM   14133  CG1  ILE   2122      14.526 -20.260  61.856  1.00 20.97
ATOM   14134  CD1  ILE   2122      13.404 -20.310  62.873  1.00 23.87
ATOM   14135  C    ILE   2122      16.545 -18.882  60.020  1.00 16.60
ATOM   14136  O    ILE   2122      17.017 -17.772  59.792  1.00 17.43
ATOM   14137  N    THR   2123      15.743 -19.513  59.166  1.00 18.07
ATOM   14138  CA   THR   2123      15.330 -18.866  57.923  1.00 17.40
ATOM   14139  CB   THR   2123      14.902 -19.892  56.836  1.00 19.53
ATOM   14140  OG1  THR   2123      13.739 -20.612  57.278  1.00 20.71
ATOM   14141  CG2  THR   2123      16.039 -20.876  56.547  1.00 19.80
ATOM   14142  C    THR   2123      14.134 -17.973  58.229  1.00 16.12
ATOM   14143  O    THR   2123      13.373 -18.244  59.152  1.00 17.78
ATOM   14144  N    ALA   2124      13.978 -16.903  57.459  1.00 16.44
ATOM   14145  CA   ALA   2124      12.863 -15.976  57.646  1.00 15.59
ATOM   14146  CB   ALA   2124      13.226 -14.918  58.685  1.00 17.03
ATOM   14147  C    ALA   2124      12.600 -15.330  56.291  1.00 14.67
ATOM   14148  O    ALA   2124      13.539 -15.046  55.556  1.00 13.64
ATOM   14149  N    TYR   2125      11.331 -15.107  55.956  1.00 13.33
ATOM   14150  CA   TYR   2125      10.985 -14.521  54.659  1.00 12.55
ATOM   14151  CB   TYR   2125      10.439 -15.599  53.712  1.00 14.08
ATOM   14152  CG   TYR   2125      11.166 -16.926  53.797  1.00 13.16
ATOM   14153  CD1  TYR   2125      10.597 -18.007  54.464  1.00 15.20
ATOM   14154  CE1  TYR   2125      11.268 -19.220  54.578  1.00 19.44
ATOM   14155  CD2  TYR   2125      12.436 -17.090  53.240  1.00 15.12
ATOM   14156  CE2  TYR   2125      13.122 -18.308  53.351  1.00 16.49
ATOM   14157  CZ   TYR   2125      12.527 -19.362  54.023  1.00 17.45
ATOM   14158  OH   TYR   2125      13.190 -20.559  54.160  1.00 18.95
ATOM   14159  C    TYR   2125       9.957 -13.401  54.752  1.00 14.84
ATOM   14160  O    TYR   2125       9.513 -12.876  53.726  1.00 13.18
ATOM   14161  N    ASP   2126       9.569 -13.030  55.967  1.00 15.18
ATOM   14162  CA   ASP   2126       8.586 -11.969  56.114  1.00 15.35
ATOM   14163  CB   ASP   2126       7.164 -12.552  55.980  1.00 16.11
ATOM   14164  CG   ASP   2126       6.804 -13.517  57.105  1.00 17.38
ATOM   14165  OD1  ASP   2126       6.660 -13.064  58.256  1.00 17.19
ATOM   14166  OD2  ASP   2126       6.665 -14.729  56.837  1.00 17.99
ATOM   14167  C    ASP   2126       8.740 -11.166  57.410  1.00 16.68
ATOM   14168  O    ASP   2126       9.480 -11.549  58.325  1.00 15.28
ATOM   14169  N    TYR   2127       8.046 -10.038  57.475  1.00 15.28
ATOM   14170  CA   TYR   2127       8.120  -9.164  58.641  1.00 17.17
ATOM   14171  CB   TYR   2127       7.276  -7.913  58.397  1.00 17.79
ATOM   14172  CG   TYR   2127       6.992  -7.109  59.641  1.00 17.73
ATOM   14173  CD1  TYR   2127       7.875  -6.122  60.075  1.00 20.38
ATOM   14174  CE1  TYR   2127       7.605  -5.367  61.218  1.00 20.48
ATOM   14175  CD2  TYR   2127       5.832  -7.331  60.379  1.00 20.09
ATOM   14176  CE2  TYR   2127       5.551  -6.590  61.519  1.00 22.06
ATOM   14177  CZ   TYR   2127       6.439  -5.610  61.930  1.00 23.04
ATOM   14178  OH   TYR   2127       6.152  -4.857  63.050  1.00 24.49
ATOM   14179  C    TYR   2127       7.671  -9.827  59.937  1.00 18.30
ATOM   14180  O    TYR   2127       8.354  -9.732  60.961  1.00 17.92
ATOM   14181  N    SER   2128       6.518 -10.487  59.886  1.00 19.07
ATOM   14182  CA   SER   2128       5.943 -11.136  61.055  1.00 21.09
ATOM   14183  CB   SER   2128       4.638 -11.836  60.682  1.00 22.18
ATOM   14184  OG   SER   2128       3.632 -10.872  60.424  1.00 21.45
ATOM   14185  C    SER   2128       6.861 -12.120  61.754  1.00 21.26
ATOM   14186  O    SER   2128       7.154 -11.960  62.943  1.00 20.52
ATOM   14187  N    PHE   2129       7.310 -13.143  61.036  1.00 18.91
ATOM   14188  CA   PHE   2129       8.194 -14.111  61.661  1.00 18.72
ATOM   14189  CB   PHE   2129       8.404 -15.338  60.770  1.00 19.49
ATOM   14190  CG   PHE   2129       7.255 -16.303  60.797  1.00 20.01
ATOM   14191  CD1  PHE   2129       6.312 -16.317  59.772  1.00 18.47
ATOM   14192  CD2  PHE   2129       7.101 -17.186  61.862  1.00 19.74
ATOM   14193  CE1  PHE   2129       5.238 -17.198  59.811  1.00 19.85
ATOM   14194  CE2  PHE   2129       6.030 -18.067  61.907  1.00 20.86
ATOM   14195  CZ   PHE   2129       5.094 -18.076  60.879  1.00 20.11
ATOM   14196  C    PHE   2129       9.527 -13.489  62.039  1.00 17.47
```

```
ATOM   14197  O   PHE  2129    10.064 -13.799  63.097  1.00 19.26
ATOM   14198  N   ALA  2130    10.055 -12.599  61.200  1.00 18.95
ATOM   14199  CA  ALA  2130    11.333 -11.958  61.507  1.00 17.77
ATOM   14200  CB  ALA  2130    11.724 -11.007  60.396  1.00 17.99
ATOM   14201  C   ALA  2130    11.247 -11.203  62.830  1.00 20.34
ATOM   14202  O   ALA  2130    12.143 -11.284  63.673  1.00 17.97
ATOM   14203  N   LYS  2131    10.156 -10.465  63.001  1.00 19.46
ATOM   14204  CA  LYS  2131     9.932  -9.692  64.215  1.00 22.35
ATOM   14205  CB  LYS  2131     8.625  -8.900  64.090  1.00 23.83
ATOM   14206  CG  LYS  2131     8.301  -7.979  65.265  1.00 26.46
ATOM   14207  CD  LYS  2131     9.254  -6.793  65.315  1.00 29.95
ATOM   14208  CE  LYS  2131     8.767  -5.717  66.277  1.00 30.64
ATOM   14209  NZ  LYS  2131     8.650  -6.214  67.675  1.00 32.08
ATOM   14210  C   LYS  2131     9.861 -10.627  65.420  1.00 21.60
ATOM   14211  O   LYS  2131    10.447 -10.352  66.469  1.00 24.21
ATOM   14212  N   LEU  2132     9.149 -11.737  65.259  1.00 20.48
ATOM   14213  CA  LEU  2132     8.981 -12.712  66.331  1.00 21.79
ATOM   14214  CB  LEU  2132     8.000 -13.805  65.892  1.00 20.32
ATOM   14215  CG  LEU  2132     7.523 -14.833  66.930  1.00 21.91
ATOM   14216  CD1 LEU  2132     6.279 -15.525  66.407  1.00 21.23
ATOM   14217  CD2 LEU  2132     8.608 -15.864  67.222  1.00 19.41
ATOM   14218  C   LEU  2132    10.303 -13.335  66.764  1.00 21.65
ATOM   14219  O   LEU  2132    10.524 -13.577  67.954  1.00 20.18
ATOM   14220  N   PHE  2133    11.177 -13.615  65.803  1.00 20.32
ATOM   14221  CA  PHE  2133    12.474 -14.204  66.127  1.00 20.05
ATOM   14222  CB  PHE  2133    13.196 -14.655  64.851  1.00 18.15
ATOM   14223  CG  PHE  2133    12.452 -15.698  64.066  1.00 15.76
ATOM   14224  CD1 PHE  2133    11.618 -16.610  64.707  1.00 15.98
ATOM   14225  CD2 PHE  2133    12.598 -15.775  62.680  1.00 16.44
ATOM   14226  CE1 PHE  2133    10.934 -17.585  63.982  1.00 17.09
ATOM   14227  CE2 PHE  2133    11.922 -16.746  61.947  1.00 13.66
ATOM   14228  CZ  PHE  2133    11.087 -17.653  62.595  1.00 15.97
ATOM   14229  C   PHE  2133    13.344 -13.213  66.875  1.00 20.41
ATOM   14230  O   PHE  2133    13.940 -13.549  67.899  1.00 22.66
ATOM   14231  N   ALA  2134    13.420 -11.991  66.356  1.00 20.90
ATOM   14232  CA  ALA  2134    14.230 -10.952  66.977  1.00 22.59
ATOM   14233  CB  ALA  2134    14.139  -9.675  66.161  1.00 22.94
ATOM   14234  C   ALA  2134    13.799 -10.690  68.417  1.00 25.23
ATOM   14235  O   ALA  2134    14.636 -10.474  69.294  1.00 25.72
ATOM   14236  N   ASP  2135    12.494 -10.719  68.666  1.00 24.88
ATOM   14237  CA  ASP  2135    12.001 -10.471  70.017  1.00 27.30
ATOM   14238  CB  ASP  2135    10.489 -10.246  70.009  1.00 28.36
ATOM   14239  CG  ASP  2135    10.086  -8.973  69.291  1.00 28.77
ATOM   14240  OD1 ASP  2135    10.963  -8.137  68.993  1.00 29.20
ATOM   14241  OD2 ASP  2135     8.876  -8.808  69.034  1.00 28.65
ATOM   14242  C   ASP  2135    12.334 -11.593  71.000  1.00 27.17
ATOM   14243  O   ASP  2135    12.518 -11.342  72.189  1.00 26.00
ATOM   14244  N   GLU  2136    12.406 -12.828  70.510  1.00 27.96
ATOM   14245  CA  GLU  2136    12.708 -13.964  71.377  1.00 28.87
ATOM   14246  CB  GLU  2136    12.111 -15.247  70.809  1.00 27.56
ATOM   14247  CG  GLU  2136    10.611 -15.241  70.812  1.00 30.49
ATOM   14248  CD  GLU  2136    10.063 -14.819  72.157  1.00 31.36
ATOM   14249  OE1 GLU  2136    10.393 -15.491  73.158  1.00 32.34
ATOM   14250  OE2 GLU  2136     9.319 -13.816  72.207  1.00 28.17
ATOM   14251  C   GLU  2136    14.187 -14.178  71.629  1.00 29.36
ATOM   14252  O   GLU  2136    14.567 -14.891  72.559  1.00 30.73
ATOM   14253  N   GLY  2137    15.029 -13.581  70.794  1.00 30.45
ATOM   14254  CA  GLY  2137    16.461 -13.738  70.988  1.00 30.66
ATOM   14255  C   GLY  2137    17.255 -14.119  69.754  1.00 29.34
ATOM   14256  O   GLY  2137    18.475 -13.979  69.749  1.00 28.38
ATOM   14257  N   LEU  2138    16.572 -14.607  68.720  1.00 28.35
ATOM   14258  CA  LEU  2138    17.229 -15.003  67.471  1.00 26.93
ATOM   14259  CB  LEU  2138    16.304 -15.885  66.634  1.00 28.35
ATOM   14260  CG  LEU  2138    16.435 -17.385  66.848  1.00 27.76
ATOM   14261  CD1 LEU  2138    15.372 -18.123  66.059  1.00 24.29
ATOM   14262  CD2 LEU  2138    17.826 -17.827  66.426  1.00 29.18
ATOM   14263  C   LEU  2138    17.590 -13.765  66.674  1.00 27.25
ATOM   14264  O   LEU  2138    16.708 -13.065  66.183  1.00 27.95
ATOM   14265  N   ASN  2139    18.886 -13.508  66.536  1.00 24.39
ATOM   14266  CA  ASN  2139    19.344 -12.333  65.818  1.00 23.70
ATOM   14267  CB  ASN  2139    20.224 -11.464  66.722  1.00 27.76
ATOM   14268  CG  ASN  2139    19.509 -11.026  67.982  1.00 31.16
ATOM   14269  OD1 ASN  2139    18.415 -10.458  67.924  1.00 34.02
ATOM   14270  ND2 ASN  2139    20.125 -11.279  69.130  1.00 33.28
ATOM   14271  C   ASN  2139    20.112 -12.664  64.552  1.00 20.12
ATOM   14272  O   ASN  2139    20.800 -11.804  64.016  1.00 21.01
ATOM   14273  N   VAL  2140    20.020 -13.905  64.089  1.00 17.90
```

```
ATOM   14274  CA   VAL  2140     20.703 -14.304  62.860  1.00 17.14
ATOM   14275  CB   VAL  2140     21.860 -15.287  63.124  1.00 19.66
ATOM   14276  CG1  VAL  2140     22.638 -15.512  61.834  1.00 17.34
ATOM   14277  CG2  VAL  2140     22.770 -14.735  64.215  1.00 21.32
ATOM   14278  C    VAL  2140     19.682 -14.991  61.969  1.00 14.62
ATOM   14279  O    VAL  2140     19.224 -16.085  62.273  1.00 14.94
ATOM   14280  N    MET  2141     19.324 -14.338  60.872  1.00 15.56
ATOM   14281  CA   MET  2141     18.332 -14.888  59.971  1.00 15.34
ATOM   14282  CB   MET  2141     17.066 -14.034  60.024  1.00 17.74
ATOM   14283  CG   MET  2141     16.383 -14.068  61.383  1.00 20.01
ATOM   14284  SD   MET  2141     15.060 -12.883  61.483  1.00 22.65
ATOM   14285  CE   MET  2141     15.531 -11.942  62.941  1.00 20.39
ATOM   14286  C    MET  2141     18.827 -14.989  58.548  1.00 14.81
ATOM   14287  O    MET  2141     19.577 -14.136  58.069  1.00 14.45
ATOM   14288  N    LEU  2142     18.393 -16.040  57.869  1.00 15.04
ATOM   14289  CA   LEU  2142     18.781 -16.250  56.483  1.00 15.97
ATOM   14290  CB   LEU  2142     19.477 -17.609  56.352  1.00 17.78
ATOM   14291  CG   LEU  2142     19.965 -18.146  54.997  1.00 23.22
ATOM   14292  CD1  LEU  2142     18.838 -18.861  54.306  1.00 25.80
ATOM   14293  CD2  LEU  2142     20.536 -17.032  54.136  1.00 22.00
ATOM   14294  C    LEU  2142     17.555 -16.182  55.572  1.00 14.69
ATOM   14295  O    LEU  2142     16.570 -16.886  55.781  1.00 14.54
ATOM   14296  N    VAL  2143     17.626 -15.299  54.582  1.00 13.79
ATOM   14297  CA   VAL  2143     16.567 -15.156  53.596  1.00 14.55
ATOM   14298  CB   VAL  2143     16.390 -13.691  53.162  1.00 15.17
ATOM   14299  CG1  VAL  2143     15.300 -13.584  52.093  1.00 17.16
ATOM   14300  CG2  VAL  2143     16.006 -12.837  54.379  1.00 16.68
ATOM   14301  C    VAL  2143     17.126 -15.985  52.450  1.00 14.62
ATOM   14302  O    VAL  2143     17.824 -15.466  51.583  1.00 15.21
ATOM   14303  N    GLY  2144     16.843 -17.283  52.474  1.00 16.51
ATOM   14304  CA   GLY  2144     17.379 -18.166  51.454  1.00 16.80
ATOM   14305  C    GLY  2144     16.441 -18.554  50.339  1.00 16.58
ATOM   14306  O    GLY  2144     15.221 -18.396  50.455  1.00 15.97
ATOM   14307  N    ASP  2145     17.009 -19.077  49.254  1.00 15.26
ATOM   14308  CA   ASP  2145     16.193 -19.474  48.107  1.00 16.47
ATOM   14309  CB   ASP  2145     17.066 -19.746  46.875  1.00 16.11
ATOM   14310  CG   ASP  2145     18.084 -20.849  47.095  1.00 17.05
ATOM   14311  OD1  ASP  2145     18.119 -21.434  48.182  1.00 15.53
ATOM   14312  OD2  ASP  2145     18.853 -21.122  46.159  1.00 20.23
ATOM   14313  C    ASP  2145     15.289 -20.667  48.406  1.00 14.31
ATOM   14314  O    ASP  2145     14.536 -21.124  47.542  1.00 13.80
ATOM   14315  N    SER  2146     15.350 -21.158  49.642  1.00 15.43
ATOM   14316  CA   SER  2146     14.475 -22.251  50.051  1.00 13.71
ATOM   14317  CB   SER  2146     14.764 -22.668  51.498  1.00 14.86
ATOM   14318  OG   SER  2146     14.708 -21.562  52.384  1.00 15.94
ATOM   14319  C    SER  2146     13.050 -21.724  49.938  1.00 13.48
ATOM   14320  O    SER  2146     12.086 -22.493  49.838  1.00 13.05
ATOM   14321  N    LEU  2147     12.911 -20.403  49.960  1.00 13.53
ATOM   14322  CA   LEU  2147     11.580 -19.798  49.848  1.00 15.06
ATOM   14323  CB   LEU  2147     11.676 -18.270  49.964  1.00 14.88
ATOM   14324  CG   LEU  2147     12.398 -17.474  48.868  1.00 15.50
ATOM   14325  CD1  LEU  2147     11.425 -17.211  47.718  1.00 12.97
ATOM   14326  CD2  LEU  2147     12.914 -16.144  49.442  1.00 14.61
ATOM   14327  C    LEU  2147     10.902 -20.193  48.532  1.00 15.02
ATOM   14328  O    LEU  2147      9.674 -20.120  48.406  1.00 13.70
ATOM   14329  N    GLY  2148     11.699 -20.618  47.556  1.00 13.80
ATOM   14330  CA   GLY  2148     11.129 -21.027  46.282  1.00 14.73
ATOM   14331  C    GLY  2148     10.168 -22.193  46.449  1.00 15.52
ATOM   14332  O    GLY  2148      9.240 -22.374  45.664  1.00 15.06
ATOM   14333  N    MET  2149     10.384 -22.984  47.490  1.00 16.51
ATOM   14334  CA   MET  2149      9.543 -24.142  47.739  1.00 18.26
ATOM   14335  CB   MET  2149     10.420 -25.344  48.105  1.00 19.59
ATOM   14336  CG   MET  2149     11.372 -25.737  46.979  1.00 23.21
ATOM   14337  SD   MET  2149     12.577 -27.009  47.403  1.00 26.89
ATOM   14338  CE   MET  2149     11.515 -28.406  47.735  1.00 27.42
ATOM   14339  C    MET  2149      8.525 -23.867  48.836  1.00 17.57
ATOM   14340  O    MET  2149      7.330 -24.072  48.643  1.00 18.80
ATOM   14341  N    THR  2150      9.000 -23.374  49.974  1.00 17.41
ATOM   14342  CA   THR  2150      8.125 -23.094  51.106  1.00 19.06
ATOM   14343  CB   THR  2150      8.947 -22.896  52.395  1.00 20.48
ATOM   14344  OG1  THR  2150      8.052 -22.760  53.500  1.00 28.01
ATOM   14345  CG2  THR  2150      9.819 -21.652  52.296  1.00 16.62
ATOM   14346  C    THR  2150      7.189 -21.893  50.948  1.00 19.09
ATOM   14347  O    THR  2150      6.085 -21.890  51.495  1.00 19.04
ATOM   14348  N    VAL  2151      7.631 -20.878  50.212  1.00 15.32
ATOM   14349  CA   VAL  2151      6.816 -19.688  50.000  1.00 15.78
ATOM   14350  CB   VAL  2151      7.660 -18.400  50.167  1.00 14.07
```

```
ATOM   14351  CG1 VAL  2151       6.850 -17.167  49.740  1.00 14.82
ATOM   14352  CG2 VAL  2151       8.092 -18.258  51.629  1.00 16.78
ATOM   14353  C   VAL  2151       6.122 -19.683  48.634  1.00 15.00
ATOM   14354  O   VAL  2151       4.892 -19.573  48.554  1.00 12.68
ATOM   14355  N   GLN  2152       6.898 -19.827  47.562  1.00 12.81
ATOM   14356  CA  GLN  2152       6.332 -19.819  46.205  1.00 12.29
ATOM   14357  CB  GLN  2152       7.413 -19.435  45.195  1.00  9.78
ATOM   14358  CG  GLN  2152       8.125 -18.150  45.545  1.00 11.69
ATOM   14359  CD  GLN  2152       9.274 -17.866  44.616  1.00 12.80
ATOM   14360  OE1 GLN  2152       9.733 -18.750  43.901  1.00 13.02
ATOM   14361  NE2 GLN  2152       9.765 -16.630  44.639  1.00 10.46
ATOM   14362  C   GLN  2152       5.673 -21.127  45.773  1.00 13.36
ATOM   14363  O   GLN  2152       4.812 -21.127  44.897  1.00 13.82
ATOM   14364  N   GLY  2153       6.089 -22.244  46.368  1.00 14.36
ATOM   14365  CA  GLY  2153       5.485 -23.517  46.020  1.00 13.48
ATOM   14366  C   GLY  2153       6.071 -24.295  44.852  1.00 14.85
ATOM   14367  O   GLY  2153       5.409 -25.187  44.308  1.00 13.64
ATOM   14368  N   HIS  2154       7.301 -23.974  44.464  1.00 14.25
ATOM   14369  CA  HIS  2154       7.965 -24.675  43.362  1.00 16.22
ATOM   14370  CB  HIS  2154       9.061 -23.799  42.755  1.00 14.89
ATOM   14371  CG  HIS  2154       8.556 -22.555  42.100  1.00 16.52
ATOM   14372  CD2 HIS  2154       8.719 -21.251  42.426  1.00 15.21
ATOM   14373  ND1 HIS  2154       7.799 -22.572  40.949  1.00 16.03
ATOM   14374  CE1 HIS  2154       7.519 -21.332  40.595  1.00 18.56
ATOM   14375  NE2 HIS  2154       8.066 -20.512  41.474  1.00 18.50
ATOM   14376  C   HIS  2154       8.586 -25.991  43.836  1.00 17.17
ATOM   14377  O   HIS  2154       8.770 -26.202  45.032  1.00 17.56
ATOM   14378  N   ASP  2155       8.913 -26.868  42.889  1.00 18.27
ATOM   14379  CA  ASP  2155       9.507 -28.163  43.211  1.00 21.07
ATOM   14380  CB  ASP  2155       9.344 -29.141  42.041  1.00 26.36
ATOM   14381  CG  ASP  2155      10.020 -28.659  40.771  1.00 30.40
ATOM   14382  OD1 ASP  2155      11.238 -28.378  40.795  1.00 35.46
ATOM   14383  OD2 ASP  2155       9.331 -28.562  39.727  1.00 38.63
ATOM   14384  C   ASP  2155      10.986 -28.060  43.568  1.00 18.34
ATOM   14385  O   ASP  2155      11.600 -29.037  43.990  1.00 19.68
ATOM   14386  N   SER  2156      11.559 -26.878  43.387  1.00 17.56
ATOM   14387  CA  SER  2156      12.968 -26.667  43.692  1.00 14.88
ATOM   14388  CB  SER  2156      13.847 -27.160  42.535  1.00 15.97
ATOM   14389  OG  SER  2156      13.813 -26.262  41.438  1.00 12.59
ATOM   14390  C   SER  2156      13.215 -25.187  43.923  1.00 15.41
ATOM   14391  O   SER  2156      12.300 -24.372  43.791  1.00 14.28
ATOM   14392  N   THR  2157      14.449 -24.833  44.263  1.00 13.49
ATOM   14393  CA  THR  2157      14.776 -23.433  44.514  1.00 14.04
ATOM   14394  CB  THR  2157      15.901 -23.292  45.558  1.00 14.05
ATOM   14395  OG1 THR  2157      17.117 -23.825  45.018  1.00 16.03
ATOM   14396  CG2 THR  2157      15.550 -24.034  46.839  1.00 16.22
ATOM   14397  C   THR  2157      15.219 -22.668  43.270  1.00 13.58
ATOM   14398  O   THR  2157      15.329 -21.440  43.313  1.00 12.41
ATOM   14399  N   LEU  2158      15.450 -23.374  42.162  1.00 13.34
ATOM   14400  CA  LEU  2158      15.926 -22.722  40.937  1.00 12.31
ATOM   14401  CB  LEU  2158      16.087 -23.761  39.808  1.00 14.42
ATOM   14402  CG  LEU  2158      17.337 -24.646  39.959  1.00 16.63
ATOM   14403  CD1 LEU  2158      17.106 -25.616  41.104  1.00 17.91
ATOM   14404  CD2 LEU  2158      17.631 -25.409  38.669  1.00 18.40
ATOM   14405  C   LEU  2158      15.166 -21.500  40.413  1.00 12.03
ATOM   14406  O   LEU  2158      15.779 -20.523  40.004  1.00 11.95
ATOM   14407  N   PRO  2159      13.825 -21.526  40.437  1.00 11.73
ATOM   14408  CD  PRO  2159      12.922 -22.627  40.802  1.00 13.77
ATOM   14409  CA  PRO  2159      13.060 -20.378  39.941  1.00 11.00
ATOM   14410  CB  PRO  2159      11.629 -20.913  39.914  1.00 13.29
ATOM   14411  CG  PRO  2159      11.619 -21.891  41.005  1.00 17.80
ATOM   14412  C   PRO  2159      13.181 -19.078  40.737  1.00  8.57
ATOM   14413  O   PRO  2159      12.796 -18.016  40.253  1.00 10.80
ATOM   14414  N   VAL  2160      13.717 -19.147  41.949  1.00  9.75
ATOM   14415  CA  VAL  2160      13.856 -17.939  42.764  1.00 10.64
ATOM   14416  CB  VAL  2160      14.334 -18.295  44.191  1.00  7.98
ATOM   14417  CG1 VAL  2160      14.487 -17.023  45.046  1.00  8.99
ATOM   14418  CG2 VAL  2160      13.339 -19.249  44.833  1.00  9.25
ATOM   14419  C   VAL  2160      14.827 -16.956  42.120  1.00 10.30
ATOM   14420  O   VAL  2160      15.966 -17.302  41.812  1.00 12.24
ATOM   14421  N   THR  2161      14.373 -15.718  41.940  1.00 10.56
ATOM   14422  CA  THR  2161      15.193 -14.686  41.310  1.00 13.51
ATOM   14423  CB  THR  2161      14.344 -13.853  40.324  1.00 17.26
ATOM   14424  OG1 THR  2161      13.616 -14.733  39.449  1.00 18.29
ATOM   14425  CG2 THR  2161      15.234 -12.954  39.478  1.00 19.77
ATOM   14426  C   THR  2161      15.811 -13.747  42.335  1.00 10.55
ATOM   14427  O   THR  2161      15.417 -13.755  43.496  1.00 11.77
```

```
ATOM   14428  N   VAL  2162      16.777 -12.940  41.897  1.00 12.13
ATOM   14429  CA  VAL  2162      17.435 -11.979  42.778  1.00 13.71
ATOM   14430  CB  VAL  2162      18.538 -11.216  42.019  1.00 15.08
ATOM   14431  CG1 VAL  2162      19.051 -10.057  42.858  1.00 16.93
ATOM   14432  CG2 VAL  2162      19.674 -12.172  41.676  1.00 15.68
ATOM   14433  C   VAL  2162      16.387 -11.000  43.310  1.00 13.50
ATOM   14434  O   VAL  2162      16.436 -10.571  44.469  1.00 14.68
ATOM   14435  N   ALA  2163      15.429 -10.662  42.455  1.00 13.50
ATOM   14436  CA  ALA  2163      14.352  -9.751  42.827  1.00 12.58
ATOM   14437  CB  ALA  2163      13.454  -9.473  41.606  1.00 13.55
ATOM   14438  C   ALA  2163      13.527 -10.352  43.956  1.00 12.11
ATOM   14439  O   ALA  2163      13.094  -9.637  44.872  1.00 10.50
ATOM   14440  N   ASP  2164      13.287 -11.664  43.886  1.00 10.69
ATOM   14441  CA  ASP  2164      12.515 -12.340  44.938  1.00 12.32
ATOM   14442  CB  ASP  2164      12.282 -13.822  44.607  1.00 10.37
ATOM   14443  CG  ASP  2164      11.413 -14.029  43.373  1.00 14.18
ATOM   14444  OD1 ASP  2164      10.593 -13.141  43.044  1.00 14.70
ATOM   14445  OD2 ASP  2164      11.546 -15.107  42.745  1.00 14.94
ATOM   14446  C   ASP  2164      13.272 -12.250  46.260  1.00 12.25
ATOM   14447  O   ASP  2164      12.696 -11.971  47.313  1.00 11.28
ATOM   14448  N   ILE  2165      14.574 -12.500  46.212  1.00 13.30
ATOM   14449  CA  ILE  2165      15.363 -12.429  47.433  1.00 11.13
ATOM   14450  CB  ILE  2165      16.827 -12.815  47.165  1.00 10.95
ATOM   14451  CG2 ILE  2165      17.668 -12.571  48.418  1.00 12.50
ATOM   14452  CG1 ILE  2165      16.905 -14.287  46.734  1.00  9.88
ATOM   14453  CD1 ILE  2165      16.581 -15.294  47.819  1.00 13.15
ATOM   14454  C   ILE  2165      15.317 -11.024  48.041  1.00 11.12
ATOM   14455  O   ILE  2165      15.125 -10.861  49.249  1.00 12.10
ATOM   14456  N   ALA  2166      15.478 -10.016  47.195  1.00 11.76
ATOM   14457  CA  ALA  2166      15.471  -8.618  47.634  1.00 11.59
ATOM   14458  CB  ALA  2166      15.742  -7.710  46.439  1.00 13.22
ATOM   14459  C   ALA  2166      14.154  -8.214  48.303  1.00 13.49
ATOM   14460  O   ALA  2166      14.139  -7.453  49.278  1.00 12.63
ATOM   14461  N   TYR  2167      13.056  -8.704  47.738  1.00 12.03
ATOM   14462  CA  TYR  2167      11.710  -8.448  48.230  1.00 12.41
ATOM   14463  CB  TYR  2167      10.711  -9.189  47.334  1.00 13.48
ATOM   14464  CG  TYR  2167       9.281  -9.135  47.805  1.00 12.75
ATOM   14465  CD1 TYR  2167       8.555  -7.946  47.742  1.00 15.28
ATOM   14466  CE1 TYR  2167       7.228  -7.895  48.153  1.00 14.62
ATOM   14467  CD2 TYR  2167       8.645 -10.276  48.299  1.00 13.65
ATOM   14468  CE2 TYR  2167       7.316 -10.233  48.715  1.00 13.81
ATOM   14469  CZ  TYR  2167       6.617  -9.038  48.637  1.00 13.06
ATOM   14470  OH  TYR  2167       5.303  -8.988  49.050  1.00 15.51
ATOM   14471  C   TYR  2167      11.578  -8.966  49.660  1.00 13.47
ATOM   14472  O   TYR  2167      11.200  -8.242  50.585  1.00 14.07
ATOM   14473  N   HIS  2168      11.902 -10.241  49.824  1.00 13.89
ATOM   14474  CA  HIS  2168      11.823 -10.890  51.120  1.00 13.79
ATOM   14475  CB  HIS  2168      11.943 -12.403  50.929  1.00 12.97
ATOM   14476  CG  HIS  2168      10.731 -13.014  50.289  1.00 14.62
ATOM   14477  CD2 HIS  2168      10.491 -13.400  49.012  1.00 13.57
ATOM   14478  ND1 HIS  2168       9.554 -13.220  50.976  1.00 13.84
ATOM   14479  CE1 HIS  2168       8.641 -13.706  50.152  1.00 15.74
ATOM   14480  NE2 HIS  2168       9.185 -13.825  48.954  1.00 11.68
ATOM   14481  C   HIS  2168      12.870 -10.356  52.104  1.00 14.35
ATOM   14482  O   HIS  2168      12.634 -10.331  53.313  1.00 14.35
ATOM   14483  N   THR  2169      14.011  -9.913  51.585  1.00 14.47
ATOM   14484  CA  THR  2169      15.068  -9.369  52.428  1.00 14.38
ATOM   14485  CB  THR  2169      16.367  -9.150  51.611  1.00 15.28
ATOM   14486  OG1 THR  2169      16.949 -10.425  51.308  1.00 12.29
ATOM   14487  CG2 THR  2169      17.369  -8.307  52.395  1.00 14.61
ATOM   14488  C   THR  2169      14.617  -8.050  53.079  1.00 14.47
ATOM   14489  O   THR  2169      14.784  -7.857  54.288  1.00 14.08
ATOM   14490  N   ALA  2170      14.025  -7.155  52.294  1.00 13.56
ATOM   14491  CA  ALA  2170      13.567  -5.886  52.840  1.00 13.22
ATOM   14492  CB  ALA  2170      13.008  -4.999  51.723  1.00 12.46
ATOM   14493  C   ALA  2170      12.498  -6.141  53.905  1.00 15.28
ATOM   14494  O   ALA  2170      12.467  -5.471  54.946  1.00 14.21
ATOM   14495  N   ALA  2171      11.635  -7.123  53.657  1.00 15.33
ATOM   14496  CA  ALA  2171      10.580  -7.447  54.613  1.00 15.79
ATOM   14497  CB  ALA  2171       9.646  -8.500  54.033  1.00 15.59
ATOM   14498  C   ALA  2171      11.163  -7.932  55.936  1.00 16.82
ATOM   14499  O   ALA  2171      10.733  -7.500  57.010  1.00 16.97
ATOM   14500  N   VAL  2172      12.146  -8.824  55.868  1.00 16.63
ATOM   14501  CA  VAL  2172      12.771  -9.341  57.085  1.00 16.23
ATOM   14502  CB  VAL  2172      13.769 -10.494  56.762  1.00 17.51
ATOM   14503  CG1 VAL  2172      14.616 -10.818  57.979  1.00 14.14
ATOM   14504  CG2 VAL  2172      12.999 -11.742  56.338  1.00 16.91
```

```
ATOM   14505   C    VAL   2172    13.484   -8.213   57.831   1.00  16.90
ATOM   14506   O    VAL   2172    13.432   -8.155   59.063   1.00  18.87
ATOM   14507   N    ARG   2173    14.138   -7.321   57.089   1.00  16.84
ATOM   14508   CA   ARG   2173    14.860   -6.195   57.689   1.00  17.87
ATOM   14509   CB   ARG   2173    15.594   -5.380   56.613   1.00  18.06
ATOM   14510   CG   ARG   2173    16.334   -4.149   57.156   1.00  17.82
ATOM   14511   CD   ARG   2173    17.239   -4.512   58.340   1.00  19.45
ATOM   14512   NE   ARG   2173    18.482   -5.163   57.929   1.00  18.22
ATOM   14513   CZ   ARG   2173    19.265   -5.871   58.740   1.00  18.73
ATOM   14514   NH1  ARG   2173    18.946   -6.037   60.017   1.00  17.92
ATOM   14515   NH2  ARG   2173    20.375   -6.418   58.274   1.00  17.07
ATOM   14516   C    ARG   2173    13.915   -5.283   58.467   1.00  19.95
ATOM   14517   O    ARG   2173    14.280   -4.753   59.523   1.00  18.61
ATOM   14518   N    ARG   2174    12.707   -5.089   57.945   1.00  18.95
ATOM   14519   CA   ARG   2174    11.722   -4.260   58.638   1.00  20.06
ATOM   14520   CB   ARG   2174    10.477   -4.041   57.774   1.00  18.51
ATOM   14521   CG   ARG   2174    10.726   -3.306   56.483   1.00  20.20
ATOM   14522   CD   ARG   2174     9.422   -2.876   55.813   1.00  22.84
ATOM   14523   NE   ARG   2174     9.707   -2.195   54.558   1.00  24.12
ATOM   14524   CZ   ARG   2174     9.783   -2.796   53.375   1.00  26.27
ATOM   14525   NH1  ARG   2174     9.576   -4.103   53.268   1.00  23.46
ATOM   14526   NH2  ARG   2174    10.109   -2.092   52.302   1.00  28.61
ATOM   14527   C    ARG   2174    11.319   -4.976   59.916   1.00  19.12
ATOM   14528   O    ARG   2174    11.045   -4.344   60.932   1.00  22.06
ATOM   14529   N    GLY   2175    11.289   -6.304   59.863   1.00  18.76
ATOM   14530   CA   GLY   2175    10.910   -7.080   61.034   1.00  19.18
ATOM   14531   C    GLY   2175    11.974   -7.136   62.117   1.00  19.83
ATOM   14532   O    GLY   2175    11.662   -7.173   63.311   1.00  19.15
ATOM   14533   N    ALA   2176    13.235   -7.126   61.695   1.00  17.37
ATOM   14534   CA   ALA   2176    14.365   -7.203   62.619   1.00  19.31
ATOM   14535   CB   ALA   2176    14.875   -8.644   62.690   1.00  20.30
ATOM   14536   C    ALA   2176    15.481   -6.278   62.155   1.00  20.49
ATOM   14537   O    ALA   2176    16.462   -6.728   61.560   1.00  20.07
ATOM   14538   N    PRO   2177    15.354   -4.972   62.444   1.00  21.58
ATOM   14539   CD   PRO   2177    14.298   -4.390   63.294   1.00  22.88
ATOM   14540   CA   PRO   2177    16.328   -3.943   62.064   1.00  22.64
ATOM   14541   CB   PRO   2177    15.653   -2.655   62.514   1.00  22.85
ATOM   14542   CG   PRO   2177    14.934   -3.088   63.739   1.00  25.21
ATOM   14543   C    PRO   2177    17.734   -4.080   62.631   1.00  22.77
ATOM   14544   O    PRO   2177    18.663   -3.437   62.139   1.00  23.87
ATOM   14545   N    ASN   2178    17.902   -4.910   63.654   1.00  22.77
ATOM   14546   CA   ASN   2178    19.222   -5.085   64.255   1.00  24.54
ATOM   14547   CB   ASN   2178    19.166   -4.740   65.747   1.00  28.89
ATOM   14548   CG   ASN   2178    18.808   -3.287   65.993   1.00  31.12
ATOM   14549   OD1  ASN   2178    19.380   -2.389   65.380   1.00  32.75
ATOM   14550   ND2  ASN   2178    17.861   -3.049   66.897   1.00  35.74
ATOM   14551   C    ASN   2178    19.814   -6.482   64.078   1.00  22.89
ATOM   14552   O    ASN   2178    20.908   -6.771   64.573   1.00  21.60
ATOM   14553   N    CYS   2179    19.105   -7.343   63.359   1.00  21.20
ATOM   14554   CA   CYS   2179    19.578   -8.708   63.156   1.00  19.54
ATOM   14555   CB   CYS   2179    18.419   -9.616   62.719   1.00  22.19
ATOM   14556   SG   CYS   2179    18.150   -9.714   60.895   1.00  21.61
ATOM   14557   C    CYS   2179    20.686   -8.781   62.114   1.00  18.00
ATOM   14558   O    CYS   2179    20.898   -7.845   61.336   1.00  16.56
ATOM   14559   N    LEU   2180    21.427   -9.882   62.144   1.00  17.26
ATOM   14560   CA   LEU   2180    22.466  -10.121   61.147   1.00  18.03
ATOM   14561   CB   LEU   2180    23.559  -11.046   61.684   1.00  18.50
ATOM   14562   CG   LEU   2180    24.622  -11.437   60.655   1.00  18.21
ATOM   14563   CD1  LEU   2180    25.331  -10.206   60.115   1.00  19.75
ATOM   14564   CD2  LEU   2180    25.616  -12.392   61.293   1.00  21.75
ATOM   14565   C    LEU   2180    21.647  -10.853   60.092   1.00  15.89
ATOM   14566   O    LEU   2180    21.164  -11.958   60.338   1.00  15.61
ATOM   14567   N    LEU   2181    21.483  -10.229   58.933   1.00  16.34
ATOM   14568   CA   LEU   2181    20.675  -10.802   57.865   1.00  15.32
ATOM   14569   CB   LEU   2181    19.730   -9.734   57.308   1.00  14.91
ATOM   14570   CG   LEU   2181    18.435  -10.175   56.612   1.00  15.55
ATOM   14571   CD1  LEU   2181    17.575   -8.936   56.395   1.00  16.38
ATOM   14572   CD2  LEU   2181    18.736  -10.863   55.293   1.00  20.67
ATOM   14573   C    LEU   2181    21.498  -11.382   56.727   1.00  13.75
ATOM   14574   O    LEU   2181    22.225  -10.657   56.053   1.00  14.71
ATOM   14575   N    LEU   2182    21.400  -12.690   56.525   1.00  13.90
ATOM   14576   CA   LEU   2182    22.123  -13.329   55.435   1.00  15.95
ATOM   14577   CB   LEU   2182    22.726  -14.660   55.875   1.00  15.67
ATOM   14578   CG   LEU   2182    24.149  -14.629   56.437   1.00  20.08
ATOM   14579   CD1  LEU   2182    24.196  -13.819   57.715   1.00  19.21
ATOM   14580   CD2  LEU   2182    24.609  -16.065   56.686   1.00  19.28
ATOM   14581   C    LEU   2182    21.136  -13.585   54.308   1.00  15.71
```

```
ATOM   14582  O    LEU  2182      20.040 -14.075  54.552  1.00 19.38
ATOM   14583  N    ALA  2183      21.508 -13.246  53.081  1.00 13.91
ATOM   14584  CA   ALA  2183      20.614 -13.486  51.962  1.00 14.60
ATOM   14585  CB   ALA  2183      20.126 -12.169  51.386  1.00 13.61
ATOM   14586  C    ALA  2183      21.314 -14.305  50.893  1.00 14.00
ATOM   14587  O    ALA  2183      22.471 -14.049  50.538  1.00 11.35
ATOM   14588  N    ASP  2184      20.609 -15.309  50.388  1.00 14.08
ATOM   14589  CA   ASP  2184      21.169 -16.162  49.346  1.00 16.54
ATOM   14590  CB   ASP  2184      20.341 -17.439  49.180  1.00 16.86
ATOM   14591  CG   ASP  2184      20.733 -18.535  50.138  1.00 20.98
ATOM   14592  OD1  ASP  2184   -  21.818 -18.459  50.747  1.00 22.21
ATOM   14593  OD2  ASP  2184      19.945 -19.496  50.255  1.00 20.02
ATOM   14594  C    ASP  2184      21.177 -15.479  47.997  1.00 14.79
ATOM   14595  O    ASP  2184      20.295 -14.678  47.694  1.00 15.78
ATOM   14596  N    LEU  2185      22.200 -15.764  47.200  1.00 14.30
ATOM   14597  CA   LEU  2185      22.205 -15.275  45.831  1.00 13.25
ATOM   14598  CB   LEU  2185      23.614 -15.010  45.302  1.00 15.09
ATOM   14599  CG   LEU  2185      24.210 -13.667  45.767  1.00 16.23
ATOM   14600  CD1  LEU  2185      25.463 -13.358  44.938  1.00 17.48
ATOM   14601  CD2  LEU  2185      23.181 -12.546  45.571  1.00 14.68
ATOM   14602  C    LEU  2185      21.618 -16.538  45.211  1.00 13.97
ATOM   14603  O    LEU  2185      22.118 -17.652  45.436  1.00 13.10
ATOM   14604  N    PRO  2186      20.525 -16.391  44.456  1.00 14.11
ATOM   14605  CD   PRO  2186      19.831 -15.118  44.188  1.00 15.09
ATOM   14606  CA   PRO  2186      19.847 -17.516  43.817  1.00 14.43
ATOM   14607  CB   PRO  2186      18.510 -16.910  43.396  1.00 15.40
ATOM   14608  CG   PRO  2186      18.872 -15.483  43.085  1.00 15.67
ATOM   14609  C    PRO  2186      20.584 -18.177  42.663  1.00 14.33
ATOM   14610  O    PRO  2186      21.688 -17.782  42.302  1.00 15.03
ATOM   14611  N    PHE  2187      19.945 -19.197  42.100  1.00 13.69
ATOM   14612  CA   PHE  2187      20.481 -19.951  40.977  1.00 12.48
ATOM   14613  CB   PHE  2187      19.404 -20.933  40.493  1.00 10.11
ATOM   14614  CG   PHE  2187      19.660 -21.528  39.131  1.00 13.16
ATOM   14615  CD1  PHE  2187      20.749 -22.365  38.904  1.00 11.33
ATOM   14616  CD2  PHE  2187      18.751 -21.300  38.088  1.00 12.80
ATOM   14617  CE1  PHE  2187      20.934 -22.979  37.655  1.00 14.13
ATOM   14618  CE2  PHE  2187      18.914 -21.899  36.837  1.00 12.25
ATOM   14619  CZ   PHE  2187      20.005 -22.739  36.619  1.00 13.80
ATOM   14620  C    PHE  2187      20.938 -19.024  39.849  1.00 11.25
ATOM   14621  O    PHE  2187      20.224 -18.098  39.452  1.00 11.41
ATOM   14622  N    MET  2188      22.147 -19.282  39.358  1.00 12.61
ATOM   14623  CA   MET  2188      22.762 -18.531  38.275  1.00 13.77
ATOM   14624  CB   MET  2188      22.055 -18.862  36.943  1.00 13.96
ATOM   14625  CG   MET  2188      22.956 -18.723  35.707  1.00 16.90
ATOM   14626- SD   MET  2188      24.400 -19.853  35.851  1.00 12.86
ATOM   14627  CE   MET  2188      23.813 -21.357  35.069  1.00 19.25
ATOM   14628  C    MET  2188      22.778 -17.015  38.519  1.00 14.59
ATOM   14629  O    MET  2188      22.648 -16.226  37.584  1.00 16.18
ATOM   14630  N    ALA  2189      22.933 -16.599  39.775  1.00 13.29
ATOM   14631  CA   ALA  2189      22.986 -15.167  40.099  1.00 13.72
ATOM   14632  CB   ALA  2189      22.112 -14.864  41.333  1.00 12.70
ATOM   14633  C    ALA  2189      24.437 -14.747  40.359  1.00 14.21
ATOM   14634  O    ALA  2189      24.719 -13.580  40.633  1.00 15.89
ATOM   14635  N    TYR  2190      25.357 -15.708  40.278  1.00 12.28
ATOM   14636  CA   TYR  2190      26.789 -15.433  40.483  1.00 13.07
ATOM   14637  CB   TYR  2190      27.175 -15.714  41.946  1.00 12.91
ATOM   14638  CG   TYR  2190      26.689 -17.035  42.515  1.00 11.62
ATOM   14639  CD1  TYR  2190      27.524 -18.156  42.554  1.00 11.92
ATOM   14640  CE1  TYR  2190      27.087 -19.366  43.090  1.00 12.64
ATOM   14641  CD2  TYR  2190      25.396 -17.158  43.027  1.00 14.06
ATOM   14642  CE2  TYR  2190      24.944 -18.360  43.563  1.00 13.68
ATOM   14643  CZ   TYR  2190      25.793 -19.461  43.593  1.00 14.72
ATOM   14644  OH   TYR  2190      25.349 -20.652  44.128  1.00 15.24
ATOM   14645  C    TYR  2190      27.650 -16.262  39.515  1.00 14.64
ATOM   14646  O    TYR  2190      28.681 -16.822  39.887  1.00 14.18
ATOM   14647  N    ALA  2191      27.194 -16.316  38.267  1.00 13.79
ATOM   14648  CA   ALA  2191      27.843 -17.062  37.194  1.00 14.38
ATOM   14649  CB   ALA  2191      26.929 -17.077  35.976  1.00 13.74
ATOM   14650  C    ALA  2191      29.211 -16.503  36.808  1.00 13.17
ATOM   14651  O    ALA  2191      30.072 -17.240  36.331  1.00 12.13
ATOM   14652  N    THR  2192      29.382 -15.198  36.998  1.00 12.89
ATOM   14653  CA   THR  2192      30.629 -14.500  36.705  1.00 14.63
ATOM   14654  CB   THR  2192      30.560 -13.704  35.386  1.00 15.14
ATOM   14655  OG1  THR  2192      29.676 -12.583  35.546  1.00 13.87
ATOM   14656  CG2  THR  2192      30.036 -14.589  34.254  1.00 15.22
ATOM   14657  C    THR  2192      30.828 -13.495  37.835  1.00 16.27
ATOM   14658  O    THR  2192      29.873 -13.126  38.517  1.00 15.41
```

```
ATOM   14659   N    PRO   2193        32.073 -13.042   38.053   1.00 16.19
ATOM   14660   CD   PRO   2193        33.343 -13.538   37.490   1.00 16.85
ATOM   14661   CA   PRO   2193        32.315 -12.073   39.124   1.00 16.55
ATOM   14662   CB   PRO   2193        33.803 -11.792   38.992   1.00 18.64
ATOM   14663   CG   PRO   2193        34.343 -13.133   38.552   1.00 17.11
ATOM   14664   C    PRO   2193        31.465 -10.824   38.937   1.00 15.31
ATOM   14665   O    PRO   2193        30.831 -10.354   39.876   1.00 15.59
ATOM   14666   N    GLU   2194        31.454 -10.296   37.718   1.00 16.75
ATOM   14667   CA   GLU   2194        30.687  -9.098   37.419   1.00 17.91
ATOM   14668   CB   GLU   2194        30.858  -8.711   35.948   1.00 23.31
ATOM   14669   CG   GLU   2194        32.215  -8.092   35.630   1.00 30.85
ATOM   14670   CD   GLU   2194        32.409  -7.831   34.149   1.00 35.36
ATOM   14671   OE1  GLU   2194        31.524  -7.192   33.537   1.00 39.04
ATOM   14672   OE2  GLU   2194        33.450  -8.260   33.598   1.00 39.02
ATOM   14673   C    GLU   2194        29.206  -9.245   37.757   1.00 17.81
ATOM   14674   O    GLU   2194        28.602  -8.322   38.304   1.00 17.37
ATOM   14675   N    GLN   2195        28.612 -10.390   37.435   1.00 15.20
ATOM   14676   CA   GLN   2195        27.199 -10.586   37.744   1.00 16.01
ATOM   14677   CB   GLN   2195        26.642 -11.799   36.994   1.00 17.15
ATOM   14678   CG   GLN   2195        26.551 -11.574   35.488   1.00 21.26
ATOM   14679   CD   GLN   2195        26.048 -12.795   34.750   1.00 25.19
ATOM   14680   OE1  GLN   2195        24.964 -13.304   35.038   1.00 25.51
ATOM   14681   NE2  GLN   2195        26.835 -13.273   33.787   1.00 28.35
ATOM   14682   C    GLN   2195        27.006 -10.756   39.248   1.00 14.45
ATOM   14683   O    GLN   2195        26.010 -10.300   39.798   1.00 14.86
ATOM   14684   N    ALA   2196        27.966 -11.407   39.899   1.00 12.21
ATOM   14685   CA   ALA   2196        27.908 -11.620   41.329   1.00 12.40
ATOM   14686   CB   ALA   2196        29.105 -12.455   41.795   1.00 13.23
ATOM   14687   C    ALA   2196        27.898 -10.272   42.047   1.00 11.64
ATOM   14688   O    ALA   2196        27.146 -10.072   43.010   1.00 11.62
ATOM   14689   N    PHE   2197        28.727  -9.346   41.571   1.00 11.56
ATOM   14690   CA   PHE   2197        28.809  -8.007   42.164   1.00 13.89
ATOM   14691   CB   PHE   2197        29.858  -7.146   41.442   1.00 13.21
ATOM   14692   CG   PHE   2197        31.236  -7.743   41.414   1.00 12.74
ATOM   14693   CD1  PHE   2197        31.673  -8.576   42.432   1.00 13.16
ATOM   14694   CD2  PHE   2197        32.106  -7.448   40.368   1.00 17.01
ATOM   14695   CE1  PHE   2197        32.962  -9.119   42.413   1.00 16.01
ATOM   14696   CE2  PHE   2197        33.397  -7.981   40.332   1.00 15.05
ATOM   14697   CZ   PHE   2197        33.819  -8.815   41.355   1.00 15.53
ATOM   14698   C    PHE   2197        27.469  -7.282   42.071   1.00 15.38
ATOM   14699   O    PHE   2197        26.976  -6.713   43.047   1.00 15.31
ATOM   14700   N    GLU   2198        26.900  -7.296   40.874   1.00 16.38
ATOM   14701   CA   GLU   2198        25.636  -6.629   40.619   1.00 18.38
ATOM   14702   CB   GLU   2198        25.286  -6.745   39.134   1.00 21.89
ATOM   14703   CG   GLU   2198        24.046  -5.985   38.698   1.00 28.47
ATOM   14704   CD   GLU   2198        24.133  -4.486   38.975   1.00 31.20
ATOM   14705   OE1  GLU   2198        25.253  -3.974   39.213   1.00 31.05
ATOM   14706   OE2  GLU   2198        23.074  -3.823   38.939   1.00 33.83
ATOM   14707   C    GLU   2198        24.502  -7.198   41.463   1.00 16.31
ATOM   14708   O    GLU   2198        23.748  -6.451   42.088   1.00 15.63
ATOM   14709   N    ASN   2199        24.390  -8.520   41.488   1.00 14.90
ATOM   14710   CA   ASN   2199        23.331  -9.173   42.234   1.00 15.15
ATOM   14711   CB   ASN   2199        23.176 -10.619   41.748   1.00 14.55
ATOM   14712   CG   ASN   2199        22.703 -10.687   40.306   1.00 14.12
ATOM   14713   OD1  ASN   2199        21.887  -9.869   39.880   1.00 13.06
ATOM   14714   ND2  ASN   2199        23.196 -11.666   39.551   1.00 16.16
ATOM   14715   C    ASN   2199        23.537  -9.112   43.737   1.00 13.30
ATOM   14716   O    ASN   2199        22.576  -8.971   44.494   1.00 11.68
ATOM   14717   N    ALA   2200        24.790  -9.200   44.170   1.00 13.38
ATOM   14718   CA   ALA   2200        25.106  -9.121   45.596   1.00 14.01
ATOM   14719   CB   ALA   2200        26.601  -9.377   45.819   1.00 14.48
ATOM   14720   C    ALA   2200        24.738  -7.720   46.092   1.00 12.03
ATOM   14721   O    ALA   2200        24.204  -7.558   47.189   1.00 13.32
ATOM   14722   N    ALA   2201        25.022  -6.713   45.271   1.00 13.67
ATOM   14723   CA   ALA   2201        24.716  -5.335   45.625   1.00 13.13
ATOM   14724   CB   ALA   2201        25.285  -4.370   44.573   1.00 13.81
ATOM   14725   C    ALA   2201        23.206  -5.132   45.751   1.00 13.16
ATOM   14726   O    ALA   2201        22.736  -4.435   46.645   1.00 15.03
ATOM   14727   N    THR   2202        22.446  -5.743   44.853   1.00 13.60
ATOM   14728   CA   THR   2202        20.999  -5.613   44.897   1.00 11.59
ATOM   14729   CB   THR   2202        20.353  -6.445   43.798   1.00 10.38
ATOM   14730   OG1  THR   2202        20.822  -5.973   42.537   1.00 11.16
ATOM   14731   CG2  THR   2202        18.836  -6.331   43.848   1.00 11.71
ATOM   14732   C    THR   2202        20.446  -6.068   46.244   1.00 11.76
ATOM   14733   O    THR   2202        19.665  -5.361   46.896   1.00 12.13
ATOM   14734   N    VAL   2203        20.867  -7.252   46.658   1.00 11.71
ATOM   14735   CA   VAL   2203        20.431  -7.835   47.908   1.00 14.15
```

```
ATOM   14736  CB  VAL  2203     20.883  -9.303  47.970  1.00 17.90
ATOM   14737  CG1 VAL  2203     20.327  -9.969  49.200  1.00 22.76
ATOM   14738  CG2 VAL  2203     20.393 -10.031  46.713  1.00 21.66
ATOM   14739  C   VAL  2203     20.953  -7.062  49.116  1.00 13.49
ATOM   14740  O   VAL  2203     20.251  -6.904  50.122  1.00 11.71
ATOM   14741  N   MET  2204     22.182  -6.570  49.026  1.00 12.79
ATOM   14742  CA  MET  2204     22.743  -5.798  50.136  1.00 15.57
ATOM   14743  CB  MET  2204     24.224  -5.501  49.875  1.00 16.63
ATOM   14744  CG  MET  2204     25.104  -6.724  49.887  1.00 18.75
ATOM   14745  SD  MET  2204     25.263  -7.508  51.497  1.00 19.13
ATOM   14746  CE  MET  2204     26.337  -6.307  52.339  1.00 18.60
ATOM   14747  C   MET  2204     21.963  -4.497  50.308  1.00 14.20
ATOM   14748  O   MET  2204     21.556  -4.147  51.421  1.00 13.48
ATOM   14749  N   ARG  2205     21.739  -3.785  49.208  1.00 13.14
ATOM   14750  CA  ARG  2205     20.995  -2.527  49.284  1.00 13.16
ATOM   14751  CB  ARG  2205     20.887  -1.887  47.898  1.00 13.73
ATOM   14752  CG  ARG  2205     22.229  -1.512  47.283  1.00 15.34
ATOM   14753  CD  ARG  2205     22.044  -0.529  46.141  1.00 14.72
ATOM   14754  NE  ARG  2205     23.263  -0.355  45.349  1.00 16.85
ATOM   14755  CZ  ARG  2205     23.591  -1.101  44.299  1.00 15.47
ATOM   14756  NH1 ARG  2205     22.791  -2.083  43.900  1.00 16.64
ATOM   14757  NH2 ARG  2205     24.717  -0.857  43.642  1.00 16.81
ATOM   14758  C   ARG  2205     19.601  -2.780  49.859  1.00 15.15
ATOM   14759  O   ARG  2205     19.033  -1.919  50.530  1.00 13.24
ATOM   14760  N   ALA  2206     19.071  -3.975  49.602  1.00 13.63
ATOM   14761  CA  ALA  2206     17.750  -4.366  50.090  1.00 14.83
ATOM   14762  CB  ALA  2206     17.292  -5.649  49.393  1.00 14.81
ATOM   14763  C   ALA  2206     17.717  -4.559  51.609  1.00 15.51
ATOM   14764  O   ALA  2206     16.645  -4.607  52.209  1.00 15.01
ATOM   14765  N   GLY  2207     18.888  -4.689  52.226  1.00 14.53
ATOM   14766  CA  GLY  2207     18.933  -4.854  53.666  1.00 14.24
ATOM   14767  C   GLY  2207     19.806  -5.969  54.210  1.00 14.79
ATOM   14768  O   GLY  2207     19.965  -6.098  55.430  1.00 13.55
ATOM   14769  N   ALA  2208     20.384  -6.782  53.330  1.00 13.05
ATOM   14770  CA  ALA  2208     21.235  -7.878  53.790  1.00 13.56
ATOM   14771  CB  ALA  2208     21.478  -8.860  52.650  1.00 14.49
ATOM   14772  C   ALA  2208     22.568  -7.351  54.310  1.00 13.56
ATOM   14773  O   ALA  2208     22.982  -6.257  53.946  1.00 14.11
ATOM   14774  N   ASN  2209     23.216  -8.112  55.187  1.00 14.56
ATOM   14775  CA  ASN  2209     24.526  -7.715  55.720  1.00 16.30
ATOM   14776  CB  ASN  2209     24.596  -7.881  57.236  1.00 17.22
ATOM   14777  CG  ASN  2209     23.534  -7.107  57.964  1.00 15.22
ATOM   14778  OD1 ASN  2209     23.458  -5.884  57.868  1.00 20.45
ATOM   14779  ND2 ASN  2209     22.707  -7.821  58.711  1.00 13.67
ATOM   14780  C   ASN  2209     25.579  -8.641  55.139  1.00 16.35
ATOM   14781  O   ASN  2209     26.776  -8.360  55.194  1.00 16.50
ATOM   14782  N   MET  2210     25.113  -9.755  54.594  1.00 16.82
ATOM   14783  CA  MET  2210     25.996 -10.772  54.051  1.00 16.51
ATOM   14784  CB  MET  2210     26.474 -11.661  55.197  1.00 18.41
ATOM   14785  CG  MET  2210     27.305 -12.865  54.798  1.00 19.82
ATOM   14786  SD  MET  2210     27.830 -13.789  56.264  1.00 21.89
ATOM   14787  CE  MET  2210     29.505 -13.207  56.418  1.00 21.07
ATOM   14788  C   MET  2210     25.262 -11.605  53.015  1.00 16.91
ATOM   14789  O   MET  2210     24.049 -11.784  53.100  1.00 14.74
ATOM   14790  N   VAL  2211     26.009 -12.110  52.041  1.00 15.70
ATOM   14791  CA  VAL  2211     25.444 -12.926  50.978  1.00 16.74
ATOM   14792  CB  VAL  2211     25.795 -12.306  49.613  1.00 19.57
ATOM   14793  CG1 VAL  2211     25.664 -13.330  48.525  1.00 23.64
ATOM   14794  CG2 VAL  2211     24.890 -11.110  49.342  1.00 18.37
ATOM   14795  C   VAL  2211     25.982 -14.356  51.052  1.00 17.23
ATOM   14796  O   VAL  2211     27.151 -14.570  51.388  1.00 17.13
ATOM   14797  N   LYS  2212     25.130 -15.334  50.757  1.00 18.13
ATOM   14798  CA  LYS  2212     25.558 -16.726  50.767  1.00 17.96
ATOM   14799  CB  LYS  2212     24.650 -17.582  51.669  1.00 17.25
ATOM   14800  CG  LYS  2212     25.056 -19.051  51.721  1.00 17.85
ATOM   14801  CD  LYS  2212     24.563 -19.773  52.981  1.00 19.98
ATOM   14802  CE  LYS  2212     23.056 -19.981  52.972  1.00 20.44
ATOM   14803  NZ  LYS  2212     22.617 -20.726  51.751  1.00 19.76
ATOM   14804  C   LYS  2212     25.527 -17.254  49.339  1.00 19.04
ATOM   14805  O   LYS  2212     24.612 -16.947  48.568  1.00 18.54
ATOM   14806  N   ILE  2213     26.548 -18.028  48.983  1.00 17.52
ATOM   14807  CA  ILE  2213     26.643 -18.610  47.650  1.00 17.09
ATOM   14808  CB  ILE  2213     27.620 -17.808  46.749  1.00 17.18
ATOM   14809  CG2 ILE  2213     27.019 -16.453  46.418  1.00 19.75
ATOM   14810  CG1 ILE  2213     28.972 -17.636  47.447  1.00 20.12
ATOM   14811  CD1 ILE  2213     29.984 -16.858  46.638  1.00 18.91
ATOM   14812  C   ILE  2213     27.113 -20.053  47.763  1.00 17.08
```

```
ATOM   14813  O    ILE  2213      27.899 -20.384  48.648  1.00 17.01
ATOM   14814  N    GLU  2214      26.623 -20.908  46.868  1.00 17.34
ATOM   14815  CA   GLU  2214      26.960 -22.331  46.885  1.00 18.18
ATOM   14816  CB   GLU  2214      25.729 -23.170  46.518  1.00 19.12
ATOM   14817  CG   GLU  2214      24.448 -22.784  47.239  1.00 20.19
ATOM   14818  CD   GLU  2214      23.272 -23.676  46.855  1.00 23.23
ATOM   14819  OE1  GLU  2214      23.371 -24.392  45.835  1.00 22.32
ATOM   14820  OE2  GLU  2214      22.243 -23.657  47.563  1.00 22.19
ATOM   14821  C    GLU  2214      28.086 -22.665  45.913  1.00 18.52
ATOM   14822  O    GLU  2214      28.089 -22.200  44.775  1.00 17.83
ATOM   14823  N    GLY  2215      29.048 -23.467  46.361  1.00 19.25
ATOM   14824  CA   GLY  2215      30.148 -23.837  45.484  1.00 21.18
ATOM   14825  C    GLY  2215      31.491 -23.915  46.182  1.00 21.73
ATOM   14826  O    GLY  2215      31.679 -23.332  47.249  1.00 20.66
ATOM   14827  N    GLY  2216      32.434 -24.629  45.575  1.00 22.21
ATOM   14828  CA   GLY  2216      33.749 -24.765  46.176  1.00 21.89
ATOM   14829  C    GLY  2216      34.841 -23.888  45.590  1.00 21.57
ATOM   14830  O    GLY  2216      34.682 -22.676  45.445  1.00 22.59
ATOM   14831  N    GLU  2217      35.962 -24.524  45.266  1.00 22.40
ATOM   14832  CA   GLU  2217      37.140 -23.869  44.701  1.00 23.58
ATOM   14833  CB   GLU  2217      38.119 -24.934  44.188  1.00 26.77
ATOM   14834  CG   GLU  2217      39.116 -25.430  45.213  1.00 34.27
ATOM   14835  CD   GLU  2217      40.230 -24.431  45.458  1.00 37.56
ATOM   14836  OE1  GLU  2217      39.934 -23.296  45.880  1.00 41.29
ATOM   14837  OE2  GLU  2217      41.405 -24.777  45.223  1.00 40.20
ATOM   14838  C    GLU  2217      36.881 -22.869  43.584  1.00 20.77
ATOM   14839  O    GLU  2217      37.519 -21.817  43.531  1.00 19.61
ATOM   14840  N    TRP  2218      35.950 -23.185  42.690  1.00 19.83
ATOM   14841  CA   TRP  2218      35.678 -22.291  41.576  1.00 18.55
ATOM   14842  CB   TRP  2218      34.673 -22.922  40.603  1.00 20.02
ATOM   14843  CG   TRP  2218      33.243 -22.946  41.065  1.00 18.78
ATOM   14844  CD2  TRP  2218      32.217 -22.023  40.687  1.00 17.40
ATOM   14845  CE2  TRP  2218      31.023 -22.440  41.318  1.00 16.35
ATOM   14846  CE3  TRP  2218      32.191 -20.881  39.875  1.00 15.52
ATOM   14847  CD1  TRP  2218      32.654 -23.860  41.889  1.00 19.14
ATOM   14848  NE1  TRP  2218      31.315 -23.566  42.044  1.00 19.28
ATOM   14849  CZ2  TRP  2218      29.812 -21.753  41.161  1.00 17.53
ATOM   14850  CZ3  TRP  2218      30.985 -20.199  39.719  1.00 17.03
ATOM   14851  CH2  TRP  2218      29.812 -20.640  40.362  1.00 15.23
ATOM   14852  C    TRP  2218      35.204 -20.906  42.006  1.00 17.22
ATOM   14853  O    TRP  2218      35.307 -19.950  41.237  1.00 17.68
ATOM   14854  N    LEU  2219      34.703 -20.792  43.233  1.00 17.71
ATOM   14855  CA   LEU  2219      34.213 -19.509  43.751  1.00 18.36
ATOM   14856  CB   LEU  2219      33.130 -19.746  44.809  1.00 18.12
ATOM   14857  CG   LEU  2219      31.749 -20.160  44.306  1.00 21.23
ATOM   14858  CD1  LEU  2219      30.838 -20.464  45.498  1.00 21.25
ATOM   14859  CD2  LEU  2219      31.158 -19.035  43.455  1.00 19.14
ATOM   14860  C    LEU  2219      35.299 -18.616  44.350  1.00 19.10
ATOM   14861  O    LEU  2219      35.067 -17.432  44.601  1.00 16.47
ATOM   14862  N    VAL  2220      36.482 -19.178  44.577  1.00 18.67
ATOM   14863  CA   VAL  2220      37.586 -18.417  45.162  1.00 19.82
ATOM   14864  CB   VAL  2220      38.933 -19.139  44.930  1.00 20.78
ATOM   14865  CG1  VAL  2220      40.091 -18.231  45.324  1.00 21.55
ATOM   14866  CG2  VAL  2220      38.966 -20.415  45.742  1.00 22.40
ATOM   14867  C    VAL  2220      37.714 -16.976  44.663  1.00 18.36
ATOM   14868  O    VAL  2220      37.677 -16.045  45.457  1.00 19.22
ATOM   14869  N    GLU  2221      37.864 -16.797  43.353  1.00 17.93
ATOM   14870  CA   GLU  2221      38.010 -15.462  42.790  1.00 18.36
ATOM   14871  CB   GLU  2221      38.208 -15.543  41.281  1.00 20.61
ATOM   14872  CG   GLU  2221      38.200 -14.198  40.587  1.00 26.76
ATOM   14873  CD   GLU  2221      38.529 -14.303  39.113  1.00 30.40
ATOM   14874  OE1  GLU  2221      37.805 -15.014  38.385  1.00 30.39
ATOM   14875  OE2  GLU  2221      39.517 -13.673  38.687  1.00 33.96
ATOM   14876  C    GLU  2221      36.811 -14.567  43.091  1.00 18.56
ATOM   14877  O    GLU  2221      36.965 -13.395  43.436  1.00 16.57
ATOM   14878  N    THR  2222      35.617 -15.126  42.946  1.00 17.43
ATOM   14879  CA   THR  2222      34.397 -14.381  43.197  1.00 17.79
ATOM   14880  CB   THR  2222      33.161 -15.243  42.872  1.00 17.87
ATOM   14881  OG1  THR  2222      33.175 -15.576  41.480  1.00 19.38
ATOM   14882  CG2  THR  2222      31.882 -14.485  43.188  1.00 19.18
ATOM   14883  C    THR  2222      34.326 -13.895  44.645  1.00 16.86
ATOM   14884  O    THR  2222      33.974 -12.741  44.904  1.00 15.36
ATOM   14885  N    VAL  2223      34.681 -14.767  45.586  1.00 17.57
ATOM   14886  CA   VAL  2223      34.654 -14.412  47.003  1.00 17.48
ATOM   14887  CB   VAL  2223      34.958 -15.631  47.898  1.00 18.55
ATOM   14888  CG1  VAL  2223      34.953 -15.211  49.373  1.00 20.37
ATOM   14889  CG2  VAL  2223      33.932 -16.721  47.652  1.00 16.46
```

```
ATOM  14890  C    VAL  2223    35.666 -13.320  47.329  1.00 19.79
ATOM  14891  O    VAL  2223    35.352 -12.349  48.024  1.00 17.16
ATOM  14892  N    GLN  2224    36.885 -13.489  46.827  1.00 18.72
ATOM  14893  CA   GLN  2224    37.940 -12.515  47.065  1.00 21.39
ATOM  14894  CB   GLN  2224    39.233 -12.925  46.346  1.00 24.26
ATOM  14895  CG   GLN  2224    39.725 -14.335  46.648  1.00 29.53
ATOM  14896  CD   GLN  2224    41.050 -14.655  45.953  1.00 33.18
ATOM  14897  OE1  GLN  2224    41.196 -14.464  44.738  1.00 33.20
ATOM  14898  NE2  GLN  2224    42.018 -15.150  46.722  1.00 32.66
ATOM  14899  C    GLN  2224    37.502 -11.148  46.554  1.00 19.64
ATOM  14900  O    GLN  2224    37.628 -10.149  47.253  1.00 19.34
ATOM  14901  N    MET  2225    36.978 -11.108  45.335  1.00 19.03
ATOM  14902  CA   MET  2225    36.552  -9.846  44.744  1.00 18.40
ATOM  14903  CB   MET  2225    36.306 -10.026  43.249  1.00 18.27
ATOM  14904  CG   MET  2225    37.591 -10.324  42.483  1.00 22.00
ATOM  14905  SD   MET  2225    37.353 -10.429  40.706  1.00 21.95
ATOM  14906  CE   MET  2225    37.447  -8.712  40.259  1.00 20.84
ATOM  14907  C    MET  2225    35.334  -9.226  45.415  1.00 17.69
ATOM  14908  O    MET  2225    35.232  -8.003  45.519  1.00 16.95
ATOM  14909  N    LEU  2226    34.411 -10.063  45.866  1.00 17.48
ATOM  14910  CA   LEU  2226    33.228  -9.557  46.547  1.00 17.32
ATOM  14911  CB   LEU  2226    32.245 -10.689  46.819  1.00 16.18
ATOM  14912  CG   LEU  2226    31.283 -11.057  45.681  1.00 14.70
ATOM  14913  CD1  LEU  2226    30.554 -12.330  46.056  1.00 10.61
ATOM  14914  CD2  LEU  2226    30.287  -9.923  45.438  1.00 15.10
ATOM  14915  C    LEU  2226    33.622  -8.897  47.864  1.00 17.88
ATOM  14916  O    LEU  2226    33.203  -7.777  48.158  1.00 16.44
ATOM  14917  N    THR  2227    34.429  -9.601  48.650  1.00 20.52
ATOM  14918  CA   THR  2227    34.889  -9.099  49.946  1.00 24.25
ATOM  14919  CB   THR  2227    35.886 -10.078  50.593  1.00 25.62
ATOM  14920  OG1  THR  2227    35.234 -11.334  50.830  1.00 29.56
ATOM  14921  CG2  THR  2227    36.391  -9.524  51.925  1.00 31.43
ATOM  14922  C    THR  2227    35.543  -7.721  49.851  1.00 24.33
ATOM  14923  O    THR  2227    35.235  -6.825  50.643  1.00 25.20
ATOM  14924  N    GLU  2228    36.447  -7.546  48.892  1.00 25.76
ATOM  14925  CA   GLU  2228    37.114  -6.259  48.737  1.00 26.35
ATOM  14926  CB   GLU  2228    38.353  -6.391  47.838  1.00 30.63
ATOM  14927  CG   GLU  2228    38.203  -7.358  46.687  1.00 31.85
ATOM  14928  CD   GLU  2228    39.465  -7.474  45.846  1.00 33.25
ATOM  14929  OE1  GLU  2228    40.557  -7.670  46.422  1.00 35.06
ATOM  14930  OE2  GLU  2228    39.368  -7.385  44.607  1.00 28.52
ATOM  14931  C    GLU  2228    36.160  -5.202  48.190  1.00 26.51
ATOM  14932  O    GLU  2228    36.475  -4.013  48.176  1.00 26.37
ATOM  14933  N    ARG  2229    34.983  -5.632  47.747  1.00 23.68
ATOM  14934  CA   ARG  2229    34.004  -4.690  47.228  1.00 22.45
ATOM  14935  CB   ARG  2229    33.456  -5.199  45.893  1.00 21.74
ATOM  14936  CG   ARG  2229    34.481  -5.021  44.779  1.00 21.55
ATOM  14937  CD   ARG  2229    34.202  -5.839  43.529  1.00 19.25
ATOM  14938  NE   ARG  2229    35.257  -5.628  42.538  1.00 16.72
ATOM  14939  CZ   ARG  2229    36.528  -5.998  42.696  1.00 14.29
ATOM  14940  NH1  ARG  2229    36.918  -6.607  43.804  1.00 14.68
ATOM  14941  NH2  ARG  2229    37.421  -5.745  41.748  1.00 16.15
ATOM  14942  C    ARG  2229    32.894  -4.421  48.244  1.00 20.95
ATOM  14943  O    ARG  2229    31.753  -4.099  47.889  1.00 21.04
ATOM  14944  N    ALA  2230    33.254  -4.570  49.517  1.00 19.92
ATOM  14945  CA   ALA  2230    32.362  -4.309  50.646  1.00 17.61
ATOM  14946  CB   ALA  2230    31.750  -2.915  50.500  1.00 20.44
ATOM  14947  C    ALA  2230    31.265  -5.336  50.912  1.00 18.57
ATOM  14948  O    ALA  2230    30.374  -5.085  51.722  1.00 17.70
ATOM  14949  N    VAL  2231    31.335  -6.493  50.254  1.00 17.15
ATOM  14950  CA   VAL  2231    30.324  -7.534  50.444  1.00 17.76
ATOM  14951  CB   VAL  2231    29.729  -8.000  49.083  1.00 17.93
ATOM  14952  CG1  VAL  2231    28.669  -9.075  49.316  1.00 17.35
ATOM  14953  CG2  VAL  2231    29.125  -6.822  48.335  1.00 17.32
ATOM  14954  C    VAL  2231    30.824  -8.783  51.183  1.00 17.83
ATOM  14955  O    VAL  2231    31.576  -9.582  50.623  1.00 18.81
ATOM  14956  N    PRO  2232    30.412  -8.969  52.450  1.00 16.77
ATOM  14957  CD   PRO  2232    29.701  -8.061  53.370  1.00 17.78
ATOM  14958  CA   PRO  2232    30.884 -10.168  53.145  1.00 16.29
ATOM  14959  CB   PRO  2232    30.523  -9.898  54.608  1.00 18.07
ATOM  14960  CG   PRO  2232    29.390  -8.958  54.529  1.00 18.75
ATOM  14961  C    PRO  2232    30.191 -11.391  52.557  1.00 15.35
ATOM  14962  O    PRO  2232    29.048 -11.309  52.093  1.00 15.40
ATOM  14963  N    VAL  2233    30.887 -12.520  52.576  1.00 16.70
ATOM  14964  CA   VAL  2233    30.365 -13.753  51.995  1.00 15.99
ATOM  14965  CB   VAL  2233    31.225 -14.174  50.772  1.00 17.33
ATOM  14966  CG1  VAL  2233    30.743 -15.516  50.231  1.00 15.74
```

```
ATOM   14967  CG2 VAL  2233      31.189 -13.105  49.708  1.00 16.38
ATOM   14968  C   VAL  2233      30.316 -14.958  52.924  1.00 16.80
ATOM   14969  O   VAL  2233      31.250 -15.224  53.681  1.00 16.97
ATOM   14970  N   CYS  2234      29.217 -15.695  52.838  1.00 15.58
ATOM   14971  CA  CYS  2234      29.055 -16.917  53.599  1.00 16.50
ATOM   14972  CB  CYS  2234      27.683 -16.974  54.281  1.00 15.73
ATOM   14973  SG  CYS  2234      27.369 -18.518  55.159  1.00 16.61
ATOM   14974  C   CYS  2234      29.140 -18.027  52.552  1.00 18.28
ATOM   14975  O   CYS  2234      28.428 -17.992  51.544  1.00 19.80
ATOM   14976  N   GLY  2235      30.027 -18.990  52.775  1.00 17.80
ATOM   14977  CA  GLY  2235      30.162 -20.093  51.841  1.00 17.79
ATOM   14978  C   GLY  2235      29.081 -21.125  52.090  1.00 16.39
ATOM   14979  O   GLY  2235      28.330 -21.021  53.060  1.00 16.55
ATOM   14980  N   HIS  2236      28.989 -22.123  51.219  1.00 16.49
ATOM   14981  CA  HIS  2236      27.981 -23.169  51.378  1.00 19.27
ATOM   14982  CB  HIS  2236      26.646 -22.690  50.790  1.00 19.17
ATOM   14983  CG  HIS  2236      25.489 -23.600  51.058  1.00 20.45
ATOM   14984  CD2 HIS  2236      25.434 -24.925  51.334  1.00 21.15
ATOM   14985  ND1 HIS  2236      24.182 -23.163  51.018  1.00 20.57
ATOM   14986  CE1 HIS  2236      23.372 -24.178  51.258  1.00 20.23
ATOM   14987  NE2 HIS  2236      24.107 -25.260  51.454  1.00 19.86
ATOM   14988  C   HIS  2236      28.480 -24.420  50.667  1.00 19.78
ATOM   14989  O   HIS  2236      28.538 -24.463  49.438  1.00 18.95
ATOM   14990  N   LEU  2237      28.849 -25.427  51.455  1.00 21.72
ATOM   14991  CA  LEU  2237      29.375 -26.686  50.926  1.00 22.90
ATOM   14992  CB  LEU  2237      30.823 -26.880  51.383  1.00 21.03
ATOM   14993  CG  LEU  2237      31.850 -25.837  50.920  1.00 21.00
ATOM   14994  CD1 LEU  2237      33.206 -26.144  51.536  1.00 20.20
ATOM   14995  CD2 LEU  2237      31.942 -25.844  49.401  1.00 22.91
ATOM   14996  C   LEU  2237      28.542 -27.881  51.365  1.00 22.62
ATOM   14997  O   LEU  2237      27.701 -27.768  52.256  1.00 22.68
ATOM   14998  N   GLY  2238      28.793 -29.028  50.739  1.00 23.03
ATOM   14999  CA  GLY  2238      28.052 -30.235  51.061  1.00 22.71
ATOM   15000  C   GLY  2238      26.899 -30.398  50.096  1.00 24.92
ATOM   15001  O   GLY  2238      27.094 -30.367  48.880  1.00 24.62
ATOM   15002  N   LEU  2239      25.694 -30.565  50.631  1.00 25.75
ATOM   15003  CA  LEU  2239      24.506 -30.715  49.801  1.00 27.14
ATOM   15004  CB  LEU  2239      23.427 -31.485  50.573  1.00 27.64
ATOM   15005  CG  LEU  2239      22.208 -32.031  49.822  1.00 29.36
ATOM   15006  CD1 LEU  2239      21.373 -32.870  50.782  1.00 29.18
ATOM   15007  CD2 LEU  2239      21.380 -30.905  49.248  1.00 29.54
ATOM   15008  C   LEU  2239      23.996 -29.323  49.416  1.00 27.73
ATOM   15009  O   LEU  2239      23.270 -28.681  50.181  1.00 29.81
ATOM   15010  N   THR  2240      24.391 -28.866  48.231  1.00 24.58
ATOM   15011  CA  THR  2240      23.998 -27.559  47.714  1.00 24.57
ATOM   15012  CB  THR  2240      25.156 -26.932  46.894  1.00 25.13
ATOM   15013  OG1 THR  2240      25.600 -27.858  45.890  1.00 23.49
ATOM   15014  CG2 THR  2240      26.336 -26.607  47.810  1.00 26.36
ATOM   15015  C   THR  2240      22.751 -27.721  46.840  1.00 24.62
ATOM   15016  O   THR  2240      22.843 -28.055  45.661  1.00 23.83
ATOM   15017  N   PRO  2241      21.565 -27.473  47.420  1.00 24.68
ATOM   15018  CD  PRO  2241      21.400 -26.858  48.749  1.00 25.30
ATOM   15019  CA  PRO  2241      20.267 -27.592  46.741  1.00 24.86
ATOM   15020  CB  PRO  2241      19.283 -27.004  47.758  1.00 24.84
ATOM   15021  CG  PRO  2241      20.136 -26.080  48.575  1.00 27.84
ATOM   15022  C   PRO  2241      20.112 -27.002  45.337  1.00 24.57
ATOM   15023  O   PRO  2241      19.338 -27.530  44.534  1.00 24.58
ATOM   15024  N   GLN  2242      20.828 -25.924  45.026  1.00 22.22
ATOM   15025  CA  GLN  2242      20.737 -25.335  43.687  1.00 22.19
ATOM   15026  CB  GLN  2242      21.591 -24.064  43.599  1.00 21.42
ATOM   15027  CG  GLN  2242      20.849 -22.785  43.987  1.00 19.29
ATOM   15028  CD  GLN  2242      21.784 -21.601  44.191  1.00 20.80
ATOM   15029  OE1 GLN  2242      22.795 -21.460  43.498  1.00 18.83
ATOM   15030  NE2 GLN  2242      21.441 -20.736  45.140  1.00 17.73
ATOM   15031  C   GLN  2242      21.169 -26.331  42.602  1.00 21.96
ATOM   15032  O   GLN  2242      20.690 -26.261  41.470  1.00 20.71
ATOM   15033  N   SER  2243      22.057 -27.259  42.962  1.00 20.88
ATOM   15034  CA  SER  2243      22.553 -28.271  42.032  1.00 20.30
ATOM   15035  CB  SER  2243      24.043 -28.559  42.293  1.00 20.51
ATOM   15036  OG  SER  2243      24.851 -27.405  42.099  1.00 18.03
ATOM   15037  C   SER  2243      21.772 -29.587  42.140  1.00 20.10
ATOM   15038  O   SER  2243      22.281 -30.647  41.764  1.00 19.42
ATOM   15039  N   VAL  2244      20.538 -29.519  42.633  1.00 20.27
ATOM   15040  CA  VAL  2244      19.710 -30.712  42.806  1.00 19.69
ATOM   15041  CB  VAL  2244      18.285 -30.340  43.313  1.00 20.85
ATOM   15042  CG1 VAL  2244      17.525 -29.559  42.245  1.00 19.91
ATOM   15043  CG2 VAL  2244      17.525 -31.601  43.698  1.00 21.83
```

```
ATOM   15044  C    VAL  2244      19.581 -31.558  41.538  1.00 20.01
ATOM   15045  O    VAL  2244      19.484 -32.785  41.611  1.00 19.12
ATOM   15046  N    ASN  2245      19.582 -30.907  40.379  1.00 17.97
ATOM   15047  CA   ASN  2245      19.471 -31.626  39.118  1.00 19.30
ATOM   15048  CB   ASN  2245      19.110 -30.653  37.993  1.00 17.46
ATOM   15049  CG   ASN  2245      17.709 -30.102  38.146  1.00 19.80
ATOM   15050  OD1  ASN  2245      16.727 -30.850  38.058  1.00 16.40
ATOM   15051  ND2  ASN  2245      17.601 -28.796  38.386  1.00 18.40
ATOM   15052  C    ASN  2245      20.756 -32.367  38.787  1.00 19.89
ATOM   15053  O    ASN  2245      20.734 -33.401  38.114  1.00 20.19
ATOM   15054  N    ILE  2246      21.881 -31.835  39.254  1.00 20.52
ATOM   15055  CA   ILE  2246      23.172 -32.482  39.011  1.00 21.49
ATOM   15056  CB   ILE  2246      24.365 -31.581  39.411  1.00 20.68
ATOM   15057  CG2  ILE  2246      25.654 -32.401  39.365  1.00 21.13
ATOM   15058  CG1  ILE  2246      24.464 -30.365  38.472  1.00 20.19
ATOM   15059  CD1  ILE  2246      25.006 -30.675  37.085  1.00 18.99
ATOM   15060  C    ILE  2246      23.266 -33.759  39.847  1.00 22.01
ATOM   15061  O    ILE  2246      23.619 -34.821  39.333  1.00 21.51
ATOM   15062  N    PHE  2247      22.953 -33.647  41.136  1.00 22.01
ATOM   15063  CA   PHE  2247      23.028 -34.796  42.036  1.00 24.57
ATOM   15064  CB   PHE  2247      22.955 -34.351  43.498  1.00 27.03
ATOM   15065  CG   PHE  2247      23.907 -33.243  43.852  1.00 30.51
ATOM   15066  CD1  PHE  2247      25.256 -33.328  43.522  1.00 31.67
ATOM   15067  CD2  PHE  2247      23.449 -32.113  44.530  1.00 32.37
ATOM   15068  CE1  PHE  2247      26.139 -32.302  43.860  1.00 33.67
ATOM   15069  CE2  PHE  2247      24.320 -31.082  44.873  1.00 34.16
ATOM   15070  CZ   PHE  2247      25.667 -31.174  44.538  1.00 34.12
ATOM   15071  C    PHE  2247      21.915 -35.806  41.779  1.00 24.16
ATOM   15072  O    PHE  2247      22.042 -36.975  42.136  1.00 25.60
ATOM   15073  N    GLY  2248      20.828 -35.349  41.166  1.00 22.84
ATOM   15074  CA   GLY  2248      19.712 -36.233  40.893  1.00 23.98
ATOM   15075  C    GLY  2248      18.818 -36.384  42.107  1.00 25.53
ATOM   15076  O    GLY  2248      18.079 -37.362  42.238  1.00 25.77
ATOM   15077  N    GLY  2249      18.884 -35.405  43.002  1.00 26.74
ATOM   15078  CA   GLY  2249      18.081 -35.442  44.209  1.00 29.60
ATOM   15079  C    GLY  2249      18.844 -34.872  45.387  1.00 31.46
ATOM   15080  O    GLY  2249      19.994 -34.452  45.241  1.00 31.11
ATOM   15081  N    TYR  2250      18.207 -34.848  46.553  1.00 33.81
ATOM   15082  CA   TYR  2250      18.843 -34.330  47.758  1.00 36.66
ATOM   15083  CB   TYR  2250      17.819 -33.608  48.638  1.00 38.09
ATOM   15084  CG   TYR  2250      17.136 -32.453  47.945  1.00 40.93
ATOM   15085  CD1  TYR  2250      15.946 -32.640  47.243  1.00 41.37
ATOM   15086  CE1  TYR  2250      15.325 -31.580  46.584  1.00 43.82
ATOM   15087  CD2  TYR  2250      17.694 -31.174  47.970  1.00 41.83
ATOM   15088  CE2  TYR  2250      17.086 -30.108  47.314  1.00 43.92
ATOM   15089  CZ   TYR  2250      15.902 -30.317  46.624  1.00 43.98
ATOM   15090  OH   TYR  2250      15.303 -29.264  45.971  1.00 45.48
ATOM   15091  C    TYR  2250      19.484 -35.477  48.528  1.00 37.32
ATOM   15092  O    TYR  2250      18.859 -36.090  49.392  1.00 38.37
ATOM   15093  N    LYS  2251      20.741 -35.755  48.204  1.00 37.64
ATOM   15094  CA   LYS  2251      21.481 -36.839  48.830  1.00 37.41
ATOM   15095  CB   LYS  2251      22.013 -37.776  47.742  1.00 37.65
ATOM   15096  CG   LYS  2251      20.954 -38.168  46.711  1.00 37.38
ATOM   15097  CD   LYS  2251      21.580 -38.742  45.448  1.00 37.94
ATOM   15098  CE   LYS  2251      20.519 -39.094  44.415  1.00 37.48
ATOM   15099  NZ   LYS  2251      21.114 -39.517  43.119  1.00 33.97
ATOM   15100  C    LYS  2251      22.638 -36.287  49.659  1.00 37.97
ATOM   15101  O    LYS  2251      23.176 -35.221  49.358  1.00 36.96
ATOM   15102  N    VAL  2252      23.012 -37.018  50.706  1.00 37.82
ATOM   15103  CA   VAL  2252      24.106 -36.605  51.576  1.00 39.23
ATOM   15104  CB   VAL  2252      24.319 -37.621  52.717  1.00 38.53
ATOM   15105  CG1  VAL  2252      25.416 -37.137  53.651  1.00 39.17
ATOM   15106  CG2  VAL  2252      23.024 -37.821  53.479  1.00 39.33
ATOM   15107  C    VAL  2252      25.390 -36.497  50.759  1.00 39.59
ATOM   15108  O    VAL  2252      25.584 -37.240  49.798  1.00 39.94
ATOM   15109  N    GLN  2253      26.265 -35.574  51.144  1.00 40.19
ATOM   15110  CA   GLN  2253      27.520 -35.376  50.430  1.00 41.92
ATOM   15111  CB   GLN  2253      27.512 -34.008  49.743  1.00 42.02
ATOM   15112  CG   GLN  2253      28.197 -33.976  48.384  1.00 43.44
ATOM   15113  CD   GLN  2253      27.479 -34.825  47.349  1.00 42.91
ATOM   15114  OE1  GLN  2253      26.275 -34.672  47.128  1.00 43.91
ATOM   15115  NE2  GLN  2253      28.216 -35.723  46.704  1.00 44.45
ATOM   15116  C    GLN  2253      28.697 -35.469  51.398  1.00 42.35
ATOM   15117  O    GLN  2253      28.522 -35.358  52.610  1.00 42.17
ATOM   15118  N    GLY  2254      29.895 -35.677  50.862  1.00 43.70
ATOM   15119  CA   GLY  2254      31.069 -35.779  51.709  1.00 45.07
ATOM   15120  C    GLY  2254      31.432 -37.209  52.071  1.00 46.95
```

```
ATOM   15121  O    GLY   2254      32.521 -37.466  52.581  1.00 47.08
ATOM   15122  N    ARG   2255      30.517 -38.140  51.814  1.00 48.47
ATOM   15123  CA   ARG   2255      30.742 -39.552  52.105  1.00 49.93
ATOM   15124  CB   ARG   2255      29.517 -40.378  51.696  1.00 50.98
ATOM   15125  CG   ARG   2255      28.224 -40.026  52.424  1.00 51.85
ATOM   15126  CD   ARG   2255      28.282 -40.425  53.887  1.00 52.47
ATOM   15127  NE   ARG   2255      27.032 -40.148  54.596  1.00 53.65
ATOM   15128  CZ   ARG   2255      25.864 -40.724  54.322  1.00 52.93
ATOM   15129  NH1  ARG   2255      25.768 -41.618  53.349  1.00 52.83
ATOM   15130  NH2  ARG   2255      24.786 -40.409  55.027  1.00 53.44
ATOM   15131  C    ARG   2255      31.966 -40.058  51.342  1.00 50.92
ATOM   15132  O    ARG   2255      31.965 -40.097  50.111  1.00 50.96
ATOM   15133  N    GLY   2256      33.010 -40.444  52.070  1.00 51.41
ATOM   15134  CA   GLY   2256      34.211 -40.938  51.419  1.00 52.44
ATOM   15135  C    GLY   2256      35.428 -40.069  51.677  1.00 52.97
ATOM   15136  O    GLY   2256      35.313 -38.854  51.819  1.00 52.71
ATOM   15137  N    ASP   2257      36.599 -40.694  51.732  1.00 53.48
ATOM   15138  CA   ASP   2257      37.838 -39.969  51.982  1.00 53.79
ATOM   15139  CB   ASP   2257      39.023 -40.934  52.009  1.00 55.06
ATOM   15140  CG   ASP   2257      38.901 -41.970  53.105  1.00 56.30
ATOM   15141  OD1  ASP   2257      38.722 -41.576  54.277  1.00 56.85
ATOM   15142  OD2  ASP   2257      38.987 -43.177  52.797  1.00 58.02
ATOM   15143  C    ASP   2257      38.084 -38.893  50.935  1.00 53.11
ATOM   15144  O    ASP   2257      38.356 -37.741  51.269  1.00 53.00
ATOM   15145  N    GLU   2258      37.989 -39.273  49.666  1.00 52.48
ATOM   15146  CA   GLU   2258      38.213 -38.335  48.576  1.00 51.39
ATOM   15147  CB   GLU   2258      38.123 -39.062  47.234  1.00 53.26
ATOM   15148  CG   GLU   2258      38.351 -38.169  46.028  1.00 55.82
ATOM   15149  CD   GLU   2258      38.623 -38.959  44.762  1.00 57.62
ATOM   15150  OE1  GLU   2258      39.678 -39.629  44.695  1.00 58.68
ATOM   15151  OE2  GLU   2258      37.783 -38.913  43.837  1.00 58.41
ATOM   15152  C    GLU   2258      37.210 -37.188  48.620  1.00 49.36
ATOM   15153  O    GLU   2258      37.591 -36.020  48.567  1.00 48.74
ATOM   15154  N    ALA   2259      35.929 -37.527  48.721  1.00 47.48
ATOM   15155  CA   ALA   2259      34.877 -36.521  48.778  1.00 45.65
ATOM   15156  CB   ALA   2259      33.510 -37.191  48.747  1.00 45.32
ATOM   15157  C    ALA   2259      35.023 -35.688  50.046  1.00 43.78
ATOM   15158  O    ALA   2259      34.742 -34.491  50.047  1.00 43.87
ATOM   15159  N    GLY   2260      35.466 -36.330  51.121  1.00 42.56
ATOM   15160  CA   GLY   2260      35.644 -35.632  52.380  1.00 41.13
ATOM   15161  C    GLY   2260      36.794 -34.645  52.338  1.00 40.59
ATOM   15162  O    GLY   2260      36.680 -33.524  52.837  1.00 39.79
ATOM   15163  N    ASP   2261      37.909 -35.056  51.744  1.00 38.76
ATOM   15164  CA   ASP   2261      39.070 -34.182  51.647  1.00 38.24
ATOM   15165  CB   ASP   2261      40.291 -34.959  51.141  1.00 39.33
ATOM   15166  CG   ASP   2261      40.635 -36.142  52.025  1.00 40.38
ATOM   15167  OD1  ASP   2261      40.613 -35.990  53.267  1.00 39.92
ATOM   15168  OD2  ASP   2261      40.938 -37.224  51.477  1.00 42.70
ATOM   15169  C    ASP   2261      38.775 -33.022  50.707  1.00 36.18
ATOM   15170  O    ASP   2261      39.279 -31.915  50.899  1.00 35.73
ATOM   15171  N    GLN   2262      37.951 -33.279  49.695  1.00 35.55
ATOM   15172  CA   GLN   2262      37.588 -32.246  48.728  1.00 34.77
ATOM   15173  CB   GLN   2262      36.718 -32.844  47.617  1.00 35.12
ATOM   15174  CG   GLN   2262      36.351 -31.864  46.504  1.00 37.06
ATOM   15175  CD   GLN   2262      37.568 -31.284  45.803  1.00 38.05
ATOM   15176  OE1  GLN   2262      38.409 -32.019  45.281  1.00 39.24
ATOM   15177  NE2  GLN   2262      37.665 -29.960  45.782  1.00 38.19
ATOM   15178  C    GLN   2262      36.839 -31.112  49.422  1.00 33.47
ATOM   15179  O    GLN   2262      37.118 -29.939  49.177  1.00 33.28
ATOM   15180  N    LEU   2263      35.888 -31.469  50.284  1.00 32.83
ATOM   15181  CA   LEU   2263      35.105 -30.478  51.020  1.00 31.73
ATOM   15182  CB   LEU   2263      33.968 -31.153  51.796  1.00 32.63
ATOM   15183  CG   LEU   2263      32.813 -31.739  50.973  1.00 35.13
ATOM   15184  CD1  LEU   2263      31.733 -32.282  51.905  1.00 36.24
ATOM   15185  CD2  LEU   2263      32.230 -30.652  50.073  1.00 35.79
ATOM   15186  C    LEU   2263      35.993 -29.701  51.986  1.00 30.80
ATOM   15187  O    LEU   2263      35.874 -28.484  52.110  1.00 30.26
ATOM   15188  N    LEU   2264      36.883 -30.408  52.674  1.00 29.92
ATOM   15189  CA   LEU   2264      37.789 -29.762  53.613  1.00 28.33
ATOM   15190  CB   LEU   2264      38.704 -30.804  54.259  1.00 31.47
ATOM   15191  CG   LEU   2264      39.283 -30.483  55.639  1.00 33.11
ATOM   15192  CD1  LEU   2264      40.170 -31.648  56.068  1.00 32.67
ATOM   15193  CD2  LEU   2264      40.069 -29.188  55.623  1.00 33.38
ATOM   15194  C    LEU   2264      38.631 -28.742  52.855  1.00 26.63
ATOM   15195  O    LEU   2264      38.761 -27.594  53.275  1.00 26.53
ATOM   15196  N    SER   2265      39.198 -29.170  51.732  1.00 25.34
ATOM   15197  CA   SER   2265      40.029 -28.291  50.918  1.00 25.06
```

```
ATOM   15198  CB   SER  2265      40.546 -29.036  49.686  1.00 25.94
ATOM   15199  OG   SER  2265      41.362 -28.193  48.895  1.00 26.74
ATOM   15200  C    SER  2265      39.237 -27.067  50.475  1.00 24.21
ATOM   15201  O    SER  2265      39.740 -25.945  50.524  1.00 22.95
ATOM   15202  N    ASP  2266      37.998 -27.296  50.044  1.00 23.92
ATOM   15203  CA   ASP  2266      37.124 -26.215  49.594  1.00 24.88
ATOM   15204  CB   ASP  2266      35.805 -26.776  49.045  1.00 25.99
ATOM   15205  CG   ASP  2266      35.959 -27.401  47.671  1.00 29.42
ATOM   15206  OD1  ASP  2266      36.533 -26.744  46.775  1.00 31.95
ATOM   15207  OD2  ASP  2266      35.498 -28.545  47.478  1.00 34.49
ATOM   15208  C    ASP  2266      36.827 -25.231  50.724  1.00 22.16
ATOM   15209  O    ASP  2266      36.865 -24.013  50.529  1.00 22.29
ATOM   15210  N    ALA  2267      36.531 -25.767  51.902  1.00 22.20
ATOM   15211  CA   ALA  2267      36.237 -24.944  53.069  1.00 20.33
ATOM   15212  CB   ALA  2267      35.952 -25.836  54.280  1.00 19.05
ATOM   15213  C    ALA  2267      37.419 -24.021  53.354  1.00 20.70
ATOM   15214  O    ALA  2267      37.247 -22.817  53.546  1.00 18.09
ATOM   15215  N    LEU  2268      38.622 -24.584  53.378  1.00 19.57
ATOM   15216  CA   LEU  2268      39.812 -23.781  53.629  1.00 22.22
ATOM   15217  CB   LEU  2268      41.054 -24.671  53.712  1.00 22.33
ATOM   15218  CG   LEU  2268      41.220 -25.470  54.997  1.00 23.44
ATOM   15219  CD1  LEU  2268      42.400 -26.428  54.850  1.00 24.11
ATOM   15220  CD2  LEU  2268      41.430 -24.519  56.173  1.00 23.26
ATOM   15221  C    LEU  2268      40.016 -22.736  52.544  1.00 21.76
ATOM   15222  O    LEU  2268      40.387 -21.600  52.837  1.00 23.46
ATOM   15223  N    ALA  2269      39.772 -23.120  51.295  1.00 21.45
ATOM   15224  CA   ALA  2269      39.944 -22.204  50.174  1.00 22.17
ATOM   15225  CB   ALA  2269      39.709 -22.938  48.853  1.00 22.22
ATOM   15226  C    ALA  2269      39.000 -21.015  50.283  1.00 21.51
ATOM   15227  O    ALA  2269      39.399 -19.871  50.061  1.00 21.07
ATOM   15228  N    LEU  2270      37.745 -21.285  50.620  1.00 19.82
ATOM   15229  CA   LEU  2270      36.761 -20.215  50.753  1.00 21.19
ATOM   15230  CB   LEU  2270      35.377 -20.804  51.028  1.00 19.10
ATOM   15231  CG   LEU  2270      34.777 -21.647  49.897  1.00 20.93
ATOM   15232  CD1  LEU  2270      33.488 -22.306  50.382  1.00 20.19
ATOM   15233  CD2  LEU  2270      34.509 -20.763  48.682  1.00 20.41
ATOM   15234  C    LEU  2270      37.162 -19.269  51.882  1.00 20.84
ATOM   15235  O    LEU  2270      37.037 -18.050  51.761  1.00 21.29
ATOM   15236  N    GLU  2271      37.644 -19.834  52.982  1.00 22.99
ATOM   15237  CA   GLU  2271      38.072 -19.022  54.111  1.00 22.49
ATOM   15238  CB   GLU  2271      38.484 -19.919  55.277  1.00 23.48
ATOM   15239  CG   GLU  2271      39.110 -19.168  56.431  1.00 24.86
ATOM   15240  CD   GLU  2271      39.540 -20.086  57.555  1.00 27.13
ATOM   15241  OE1  GLU  2271      40.279 -21.059  57.280  1.00 26.64
ATOM   15242  OE2  GLU  2271      39.143 -19.831  58.710  1.00 25.55
ATOM   15243  C    GLU  2271      39.241 -18.132  53.704  1.00 22.11
ATOM   15244  O    GLU  2271      39.270 -16.943  54.018  1.00 22.92
ATOM   15245  N    ALA  2272      40.205 -18.703  52.992  1.00 23.39
ATOM   15246  CA   ALA  2272      41.370 -17.938  52.558  1.00 23.06
ATOM   15247  CB   ALA  2272      42.409 -18.878  51.946  1.00 23.50
ATOM   15248  C    ALA  2272      40.978 -16.855  51.557  1.00 23.55
ATOM   15249  O    ALA  2272      41.648 -15.826  51.455  1.00 23.19
ATOM   15250  N    ALA  2273      39.893 -17.091  50.821  1.00 23.38
ATOM   15251  CA   ALA  2273      39.413 -16.135  49.826  1.00 22.05
ATOM   15252  CB   ALA  2273      38.442 -16.824  48.864  1.00 21.44
ATOM   15253  C    ALA  2273      38.734 -14.935  50.481  1.00 21.79
ATOM   15254  O    ALA  2273      38.515 -13.908  49.839  1.00 21.90
ATOM   15255  N    GLY  2274      38.390 -15.066  51.758  1.00 21.57
ATOM   15256  CA   GLY  2274      37.747 -13.961  52.445  1.00 21.55
ATOM   15257  C    GLY  2274      36.399 -14.262  53.078  1.00 21.17
ATOM   15258  O    GLY  2274      35.818 -13.392  53.725  1.00 21.65
ATOM   15259  N    ALA  2275      35.885 -15.475  52.898  1.00 22.32
ATOM   15260  CA   ALA  2275      34.596 -15.831  53.489  1.00 20.83
ATOM   15261  CB   ALA  2275      34.218 -17.257  53.107  1.00 22.14
ATOM   15262  C    ALA  2275      34.673 -15.698  55.010  1.00 21.17
ATOM   15263  O    ALA  2275      35.616 -16.184  55.634  1.00 20.62
ATOM   15264  N    GLN  2276      33.684 -15.039  55.604  1.00 21.24
ATOM   15265  CA   GLN  2276      33.667 -14.850  57.051  1.00 21.02
ATOM   15266  CB   GLN  2276      33.293 -13.402  57.378  1.00 22.86
ATOM   15267  CG   GLN  2276      34.297 -12.396  56.843  1.00 24.47
ATOM   15268  CD   GLN  2276      33.899 -10.954  57.096  1.00 27.97
ATOM   15269  OE1  GLN  2276      34.022 -10.441  58.212  1.00 29.78
ATOM   15270  NE2  GLN  2276      33.418 -10.292  56.055  1.00 27.80
ATOM   15271  C    GLN  2276      32.721 -15.817  57.752  1.00 20.18
ATOM   15272  O    GLN  2276      32.606 -15.819  58.978  1.00 18.91
ATOM   15273  N    LEU  2277      32.048 -16.645  56.961  1.00 18.68
ATOM   15274  CA   LEU  2277      31.113 -17.638  57.480  1.00 19.05
```

```
ATOM   15275  CB   LEU  2277      29.735 -17.009  57.677  1.00 21.48
ATOM   15276  CG   LEU  2277      29.290 -16.728  59.113  1.00 23.83
ATOM   15277  CD1  LEU  2277      27.983 -15.939  59.098  1.00 24.53
ATOM   15278  CD2  LEU  2277      29.105 -18.040  59.848  1.00 26.07
ATOM   15279  C    LEU  2277      30.996 -18.787  56.485  1.00 18.50
ATOM   15280  O    LEU  2277      31.197 -18.591  55.291  1.00 19.06
ATOM   15281  N    LEU  2278      30.669 -19.978  56.978  1.00 19.37
ATOM   15282  CA   LEU  2278      30.511 -21.141  56.114  1.00 20.54
ATOM   15283  CB   LEU  2278      31.795 -21.980  56.080  1.00 21.74
ATOM   15284  CG   LEU  2278      31.702 -23.321  55.329  1.00 23.36
ATOM   15285  CD1  LEU  2278      31.185 -23.110  53.910  1.00 21.69
ATOM   15286  CD2  LEU  2278      33.070 -23.977  55.307  1.00 23.09
ATOM   15287  C    LEU  2278      29.367 -22.036  56.560  1.00 20.51
ATOM   15288  O    LEU  2278      29.232 -22.346  57.746  1.00 19.68
ATOM   15289  N    VAL  2279      28.541 -22.451  55.607  1.00 19.72
ATOM   15290  CA   VAL  2279      27.431 -23.340  55.909  1.00 20.12
ATOM   15291  CB   VAL  2279      26.098 -22.829  55.295  1.00 19.59
ATOM   15292  CG1  VAL  2279      25.043 -23.929  55.348  1.00 21.46
ATOM   15293  CG2  VAL  2279      25.599 -21.615  56.063  1.00 17.21
ATOM   15294  C    VAL  2279      27.725 -24.731  55.354  1.00 19.77
ATOM   15295  O    VAL  2279      28.143 -24.878  54.202  1.00 20.28
ATOM   15296  N    LEU  2280      27.527 -25.744  56.191  1.00 18.40
ATOM   15297  CA   LEU  2280      27.727 -27.133  55.787  1.00 19.76
ATOM   15298  CB   LEU  2280      28.710 -27.847  56.717  1.00 21.85
ATOM   15299  CG   LEU  2280      30.177 -27.418  56.656  1.00 24.85
ATOM   15300  CD1  LEU  2280      30.958 -28.145  57.743  1.00 25.93
ATOM   15301  CD2  LEU  2280      30.742 -27.745  55.278  1.00 25.21
ATOM   15302  C    LEU  2280      26.376 -27.812  55.895  1.00 19.77
ATOM   15303  O    LEU  2280      25.774 -27.842  56.968  1.00 20.23
ATOM   15304  N    GLU  2281      25.908 -28.364  54.783  1.00 20.33
ATOM   15305  CA   GLU  2281      24.615 -29.023  54.747  1.00 22.59
ATOM   15306  CB   GLU  2281      23.719 -28.328  53.713  1.00 24.29
ATOM   15307  CG   GLU  2281      22.401 -29.028  53.428  1.00 25.86
ATOM   15308  CD   GLU  2281      21.456 -28.177  52.592  1.00 28.07
ATOM   15309  OE1  GLU  2281      21.924 -27.208  51.960  1.00 27.88
ATOM   15310  OE2  GLU  2281      20.247 -28.486  52.555  1.00 30.09
ATOM   15311  C    GLU  2281      24.708 -30.513  54.437  1.00 23.66
ATOM   15312  O    GLU  2281      25.362 -30.918  53.476  1.00 24.09
ATOM   15313  N    CYS  2282      24.050 -31.316  55.271  1.00 24.83
ATOM   15314  CA   CYS  2282      24.006 -32.764  55.119  1.00 26.77
ATOM   15315  CB   CYS  2282      22.988 -33.136  54.048  1.00 27.38
ATOM   15316  SG   CYS  2282      21.317 -32.574  54.459  1.00 27.22
ATOM   15317  C    CYS  2282      25.354 -33.389  54.802  1.00 29.00
ATOM   15318  O    CYS  2282      25.623 -33.800  53.670  1.00 28.72
ATOM   15319  N    VAL  2283      26.193 -33.459  55.826  1.00 29.47
ATOM   15320  CA   VAL  2283      27.523 -34.025  55.702  1.00 32.15
ATOM   15321  CB   VAL  2283      28.579 -32.892  55.597  1.00 32.80
ATOM   15322  CG1  VAL  2283      28.491 -31.988  56.812  1.00 34.08
ATOM   15323  CG2  VAL  2283      29.967 -33.473  55.474  1.00 36.16
ATOM   15324  C    VAL  2283      27.785 -34.866  56.946  1.00 31.72
ATOM   15325  O    VAL  2283      27.325 -34.529  58.035  1.00 33.06
ATOM   15326  N    PRO  2284      28.510 -35.986  56.799  1.00 32.37
ATOM   15327  CD   PRO  2284      29.211 -36.504  55.614  1.00 31.82
ATOM   15328  CA   PRO  2284      28.787 -36.818  57.970  1.00 31.61
ATOM   15329  CB   PRO  2284      29.763 -37.866  57.430  1.00 31.74
ATOM   15330  CG   PRO  2284      30.393 -37.187  56.241  1.00 34.69
ATOM   15331  C    PRO  2284      29.367 -36.005  59.120  1.00 31.47
ATOM   15332  O    PRO  2284      30.239 -35.155  58.921  1.00 30.70
ATOM   15333  N    VAL  2285      28.865 -36.263  60.322  1.00 32.63
ATOM   15334  CA   VAL  2285      29.316 -35.561  61.514  1.00 33.69
ATOM   15335  CB   VAL  2285      28.795 -36.249  62.793  1.00 34.08
ATOM   15336  CG1  VAL  2285      29.136 -35.407  64.007  1.00 34.06
ATOM   15337  CG2  VAL  2285      27.296 -36.469  62.695  1.00 35.22
ATOM   15338  C    VAL  2285      30.835 -35.506  61.583  1.00 33.95
ATOM   15339  O    VAL  2285      31.407 -34.488  61.970  1.00 32.97
ATOM   15340  N    GLU  2286      31.479 -36.606  61.200  1.00 35.14
ATOM   15341  CA   GLU  2286      32.939 -36.702  61.225  1.00 36.30
ATOM   15342  CB   GLU  2286      33.393 -38.045  60.645  1.00 38.87
ATOM   15343  CG   GLU  2286      32.532 -39.236  61.031  1.00 43.96
ATOM   15344  CD   GLU  2286      32.222 -39.277  62.510  1.00 45.93
ATOM   15345  OE1  GLU  2286      33.165 -39.136  63.317  1.00 49.42
ATOM   15346  OE2  GLU  2286      31.037 -39.458  62.864  1.00 46.85
ATOM   15347  C    GLU  2286      33.570 -35.579  60.416  1.00 35.02
ATOM   15348  O    GLU  2286      34.452 -34.868  60.898  1.00 34.61
ATOM   15349  N    LEU  2287      33.116 -35.434  59.176  1.00 34.20
ATOM   15350  CA   LEU  2287      33.631 -34.406  58.284  1.00 33.45
ATOM   15351  CB   LEU  2287      32.973 -34.536  56.910  1.00 35.44
```

```
ATOM   15352  CG   LEU  2287      33.858 -34.344  55.677  1.00 36.84
ATOM   15353  CD1  LEU  2287      33.022 -34.555  54.424  1.00 36.74
ATOM   15354  CD2  LEU  2287      34.479 -32.965  55.682  1.00 38.47
ATOM   15355  C    LEU  2287      33.363 -33.021  58.869  1.00 32.89
ATOM   15356  O    LEU  2287      34.232 -32.148  58.842  1.00 31.87
ATOM   15357  N    ALA  2288      32.158 -32.826  59.401  1.00 32.19
ATOM   15358  CA   ALA  2288      31.779 -31.547  59.999  1.00 31.97
ATOM   15359  CB   ALA  2288      30.367 -31.630  60.571  1.00 31.39
ATOM   15360  C    ALA  2288      32.762 -31.163  61.100  1.00 31.77
ATOM   15361  O    ALA  2288      33.092 -29.990  61.272  1.00 28.78
ATOM   15362  N    LYS  2289      33.219 -32.168  61.842  1.00 32.20
ATOM   15363  CA   LYS  2289      34.171 -31.966  62.927  1.00 33.72
ATOM   15364  CB   LYS  2289      34.452 -33.293  63.632  1.00 36.63
ATOM   15365  CG   LYS  2289      33.229 -33.940  64.255  1.00 41.13
ATOM   15366  CD   LYS  2289      33.491 -35.400  64.616  1.00 42.87
ATOM   15367  CE   LYS  2289      32.259 -36.040  65.241  1.00 43.20
ATOM   15368  NZ   LYS  2289      32.389 -37.516  65.366  1.00 42.39
ATOM   15369  C    LYS  2289      35.476 -31.401  62.384  1.00 33.12
ATOM   15370  O    LYS  2289      35.966 -30.378  62.863  1.00 32.46
ATOM   15371  N    ARG  2290      36.036 -32.079  61.385  1.00 33.84
ATOM   15372  CA   ARG  2290      37.288 -31.651  60.771  1.00 34.39
ATOM   15373  CB   ARG  2290      37.674 -32.589  59.624  1.00 36.92
ATOM   15374  CG   ARG  2290      38.244 -33.922  60.066  1.00 39.76
ATOM   15375  CD   ARG  2290      38.859 -34.667  58.888  1.00 41.62
ATOM   15376  NE   ARG  2290      37.866 -35.347  58.065  1.00 44.41
ATOM   15377  CZ   ARG  2290      38.110 -35.840  56.853  1.00 45.62
ATOM   15378  NH1  ARG  2290      39.319 -35.722  56.320  1.00 45.39
ATOM   15379  NH2  ARG  2290      37.149 -36.460  56.176  1.00 46.26
ATOM   15380  C    ARG  2290      37.206 -30.224  60.246  1.00 33.61
ATOM   15381  O    ARG  2290      38.051 -29.386  60.567  1.00 33.99
ATOM   15382  N    ILE  2291      36.189 -29.956  59.432  1.00 32.56
ATOM   15383  CA   ILE  2291      35.996 -28.629  58.858  1.00 30.31
ATOM   15384  CB   ILE  2291      34.739 -28.599  57.950  1.00 31.03
ATOM   15385  CG2  ILE  2291      34.514 -27.192  57.410  1.00 30.84
ATOM   15386  CG1  ILE  2291      34.914 -29.589  56.792  1.00 32.84
ATOM   15387  CD1  ILE  2291      33.694 -29.725  55.888  1.00 32.14
ATOM   15388  C    ILE  2291      35.860 -27.568  59.951  1.00 29.40
ATOM   15389  O    ILE  2291      36.503 -26.519  59.891  1.00 26.63
ATOM   15390  N    THR  2292      35.035 -27.849  60.956  1.00 27.90
ATOM   15391  CA   THR  2292      34.819 -26.904  62.051  1.00 28.75
ATOM   15392  CB   THR  2292      33.718 -27.406  63.010  1.00 28.08
ATOM   15393  OG1  THR  2292      32.489 -27.550  62.286  1.00 27.32
ATOM   15394  CG2  THR  2292      33.507 -26.418  64.147  1.00 27.19
ATOM   15395  C    THR  2292      36.086 -26.630  62.860  1.00 29.42
ATOM   15396  O    THR  2292      36.319 -25.501  63.298  1.00 28.54
ATOM   15397  N    GLU  2293      36.900 -27.663  63.052  1.00 30.75
ATOM   15398  CA   GLU  2293      38.138 -27.529  63.811  1.00 32.20
ATOM   15399  CB   GLU  2293      38.578 -28.894  64.348  1.00 35.28
ATOM   15400  CG   GLU  2293      37.547 -29.570  65.239  1.00 39.73
ATOM   15401  CD   GLU  2293      37.976 -30.958  65.686  1.00 42.81
ATOM   15402  OE1  GLU  2293      38.390 -31.763  64.822  1.00 44.94
ATOM   15403  OE2  GLU  2293      37.889 -31.250  66.899  1.00 44.47
ATOM   15404  C    GLU  2293      39.252 -26.929  62.963  1.00 30.90
ATOM   15405  O    GLU  2293      40.175 -26.306  63.487  1.00 31.84
ATOM   15406  N    ALA  2294      39.159 -27.102  61.649  1.00 30.60
ATOM   15407  CA   ALA  2294      40.180 -26.581  60.744  1.00 29.10
ATOM   15408  CB   ALA  2294      40.190 -27.394  59.456  1.00 29.45
ATOM   15409  C    ALA  2294      40.015 -25.099  60.417  1.00 28.58
ATOM   15410  O    ALA  2294      40.996 -24.404  60.150  1.00 27.98
ATOM   15411  N    LEU  2295      38.776 -24.620  60.432  1.00 26.57
ATOM   15412  CA   LEU  2295      38.501 -23.225  60.111  1.00 26.11
ATOM   15413  CB   LEU  2295      37.178 -23.108  59.348  1.00 26.01
ATOM   15414  CG   LEU  2295      37.097 -23.794  57.987  1.00 27.63
ATOM   15415  CD1  LEU  2295      35.761 -23.461  57.323  1.00 26.37
ATOM   15416  CD2  LEU  2295      38.242 -23.349  57.117  1.00 28.50
ATOM   15417  C    LEU  2295      38.449 -22.310  61.323  1.00 24.44
ATOM   15418  O    LEU  2295      37.961 -22.692  62.385  1.00 25.12
ATOM   15419  N    ALA  2296      38.953 -21.094  61.148  1.00 23.89
ATOM   15420  CA   ALA  2296      38.944 -20.102  62.212  1.00 23.70
ATOM   15421  CB   ALA  2296      40.053 -19.086  61.995  1.00 25.57
ATOM   15422  C    ALA  2296      37.591 -19.402  62.200  1.00 24.70
ATOM   15423  O    ALA  2296      37.079 -19.000  63.244  1.00 22.57
ATOM   15424  N    ILE  2297      37.015 -19.253  61.009  1.00 23.45
ATOM   15425  CA   ILE  2297      35.715 -18.601  60.877  1.00 23.32
ATOM   15426  CB   ILE  2297      35.407 -18.223  59.419  1.00 22.51
ATOM   15427  CG2  ILE  2297      36.401 -17.190  58.928  1.00 23.31
ATOM   15428  CG1  ILE  2297      35.410 -19.481  58.548  1.00 22.06
```

```
ATOM   15429  CD1 ILE  2297      34.938 -19.252  57.130  1.00 23.01
ATOM   15430  C   ILE  2297      34.625 -19.553  61.354  1.00 21.65
ATOM   15431  O   ILE  2297      34.782 -20.768  61.288  1.00 22.46
ATOM   15432  N   PRO  2298      33.499 -19.009  61.836  1.00 22.06
ATOM   15433  CD  PRO  2298      33.188 -17.587  62.064  1.00 22.11
ATOM   15434  CA  PRO  2298      32.417 -19.873  62.312  1.00 20.85
ATOM   15435  CB  PRO  2298      31.437 -18.884  62.942  1.00 21.35
ATOM   15436  CG  PRO  2298      31.698 -17.610  62.208  1.00 24.05
ATOM   15437  C   PRO  2298      31.793 -20.728  61.213  1.00 22.19
ATOM   15438  O   PRO  2298      31.678 -20.304  60.062  1.00 20.87
ATOM   15439  N   VAL  2299      31.416 -21.945  61.585  1.00 20.48
ATOM   15440  CA  VAL  2299      30.802 -22.899  60.669  1.00 21.54
ATOM   15441  CB  VAL  2299      31.628 -24.208  60.616  1.00 21.85
ATOM   15442  CG1 VAL  2299      30.961 -25.227  59.704  1.00 19.09
ATOM   15443  CG2 VAL  2299      33.035 -23.901  60.144  1.00 21.05
ATOM   15444  C   VAL  2299      29.385 -23.234  61.123  1.00 22.17
ATOM   15445  O   VAL  2299      29.189 -23.842  62.182  1.00 23.34
ATOM   15446  N   ILE  2300      28.402 -22.837  60.322  1.00 19.12
ATOM   15447  CA  ILE  2300      27.001 -23.099  60.641  1.00 18.65
ATOM   15448  CB  ILE  2300      26.087 -21.953  60.142  1.00 20.40
ATOM   15449  CG2 ILE  2300      24.633 -22.310  60.397  1.00 19.06
ATOM   15450  CG1 ILE  2300      26.480 -20.641  60.826  1.00 22.26
ATOM   15451  CD1 ILE  2300      25.706 -19.424  60.334  1.00 22.74
ATOM   15452  C   ILE  2300      26.566 -24.387  59.966  1.00 18.15
ATOM   15453  O   ILE  2300      26.727 -24.548  58.755  1.00 18.55
ATOM   15454  N   GLY  2301      26.007 -25.305  60.741  1.00 16.44
ATOM   15455  CA  GLY  2301      25.581 -26.564  60.168  1.00 17.23
ATOM   15456  C   GLY  2301      24.086 -26.811  60.070  1.00 20.10
ATOM   15457  O   GLY  2301      23.282 -26.228  60.800  1.00 17.24
ATOM   15458  N   ILE  2302      23.727 -27.683  59.134  1.00 21.06
ATOM   15459  CA  ILE  2302      22.348 -28.094  58.899  1.00 23.05
ATOM   15460  CB  ILE  2302      21.621 -27.163  57.872  1.00 26.00
ATOM   15461  CG2 ILE  2302      22.500 -26.896  56.653  1.00 27.12
ATOM   15462  CG1 ILE  2302      20.295 -27.790  57.452  1.00 27.76
ATOM   15463  CD1 ILE  2302      19.321 -27.937  58.577  1.00 31.67
ATOM   15464  C   ILE  2302      22.458 -29.517  58.358  1.00 23.20
ATOM   15465  O   ILE  2302      22.847 -29.730  57.211  1.00 23.36
ATOM   15466  N   GLY  2303      22.136 -30.493  59.200  1.00 24.09
ATOM   15467  CA  GLY  2303      22.254 -31.882  58.791  1.00 24.67
ATOM   15468  C   GLY  2303      23.715 -32.308  58.862  1.00 26.55
ATOM   15469  O   GLY  2303      24.149 -33.218  58.152  1.00 25.82
ATOM   15470  N   ALA  2304      24.472 -31.640  59.731  1.00 26.01
ATOM   15471  CA  ALA  2304      25.895 -31.923  59.910  1.00 26.83
ATOM   15472  CB  ALA  2304      26.721 -30.726  59.447  1.00 26.51
ATOM   15473  C   ALA  2304      26.247 -32.261  61.357  1.00 27.49
ATOM   15474  O   ALA  2304      27.424 -32.321  61.721  1.00 27.78
ATOM   15475  N   GLY  2305      25.227 -32.470  62.184  1.00 29.32
ATOM   15476  CA  GLY  2305      25.465 -32.796  63.580  1.00 29.51
ATOM   15477  C   GLY  2305      25.569 -31.564  64.459  1.00 29.45
ATOM   15478  O   GLY  2305      25.325 -30.447  63.998  1.00 29.69
ATOM   15479  N   ASN  2306      25.934 -31.766  65.725  1.00 27.86
ATOM   15480  CA  ASN  2306      26.062 -30.663  66.672  1.00 27.30
ATOM   15481  CB  ASN  2306      25.404 -31.029  68.014  1.00 26.47
ATOM   15482  CG  ASN  2306      26.124 -32.165  68.750  1.00 29.23
ATOM   15483  OD1 ASN  2306      25.801 -32.469  69.902  1.00 30.22
ATOM   15484  ND2 ASN  2306      27.090 -32.791  68.093  1.00 24.10
ATOM   15485  C   ASN  2306      27.508 -30.240  66.915  1.00 27.30
ATOM   15486  O   ASN  2306      27.801 -29.558  67.896  1.00 26.84
ATOM   15487  N   VAL  2307      28.406 -30.632  66.014  1.00 27.99
ATOM   15488  CA  VAL  2307      29.822 -30.302  66.150  1.00 27.99
ATOM   15489  CB  VAL  2307      30.706 -31.377  65.491  1.00 29.98
ATOM   15490  CG1 VAL  2307      32.168 -31.134  65.843  1.00 32.46
ATOM   15491  CG2 VAL  2307      30.272 -32.762  65.947  1.00 29.99
ATOM   15492  C   VAL  2307      30.168 -28.950  65.533  1.00 26.89
ATOM   15493  O   VAL  2307      31.257 -28.414  65.756  1.00 25.00
ATOM   15494  N   THR  2308      29.241 -28.402  64.753  1.00 25.39
ATOM   15495  CA  THR  2308      29.465 -27.113  64.116  1.00 24.44
ATOM   15496  CB  THR  2308      28.486 -26.890  62.930  1.00 24.99
ATOM   15497  OG1 THR  2308      27.134 -27.038  63.384  1.00 23.48
ATOM   15498  CG2 THR  2308      28.758 -27.897  61.815  1.00 23.59
ATOM   15499  C   THR  2308      29.293 -25.990  65.132  1.00 23.65
ATOM   15500  O   THR  2308      28.656 -26.169  66.167  1.00 25.62
ATOM   15501  N   ASP  2309      29.871 -24.834  64.834  1.00 23.25
ATOM   15502  CA  ASP  2309      29.785 -23.684  65.726  1.00 22.71
ATOM   15503  CB  ASP  2309      30.642 -22.546  65.189  1.00 22.91
ATOM   15504  CG  ASP  2309      32.098 -22.940  65.042  1.00 25.32
ATOM   15505  OD1 ASP  2309      32.722 -23.288  66.070  1.00 21.88
```

```
ATOM   15506  OD2 ASP  2309      32.609 -22.900  63.904  1.00 22.96
ATOM   15507  C   ASP  2309      28.351 -23.206  65.883  1.00 22.86
ATOM   15508  O   ASP  2309      27.937 -22.793  66.966  1.00 23.77
ATOM   15509  N   GLY  2310      27.592 -23.257  64.798  1.00 22.07
ATOM   15510  CA  GLY  2310      26.209 -22.814  64.857  1.00 21.62
ATOM   15511  C   GLY  2310      25.283 -23.769  64.136  1.00 20.15
ATOM   15512  O   GLY  2310      25.731 -24.742  63.533  1.00 19.40
ATOM   15513  N   GLN  2311      23.986 -23.487  64.190  1.00 21.21
ATOM   15514  CA  GLN  2311      22.990 -24.332  63.541  1.00 19.77
ATOM   15515  CB  GLN  2311      22.204 -25.118  64.592  1.00 20.52
ATOM   15516  CG  GLN  2311      23.001 -26.179  65.329  1.00 22.52
ATOM   15517  CD  GLN  2311      23.541 -27.243  64.390  1.00 21.75
ATOM   15518  OE1 GLN  2311      22.848 -27.687  63.474  1.00 21.80
ATOM   15519  NE2 GLN  2311      24.780 -27.666  64.623  1.00 21.19
ATOM   15520  C   GLN  2311      22.009 -23.485  62.736  1.00 20.67
ATOM   15521  O   GLN  2311      21.772 -22.328  63.071  1.00 17.41
ATOM   15522  N   ILE  2312      21.447 -24.060  61.676  1.00 22.09
ATOM   15523  CA  ILE  2312      20.467 -23.343  60.872  1.00 24.89
ATOM   15524  CB  ILE  2312      21.110 -22.706  59.606  1.00 25.72
ATOM   15525  CG2 ILE  2312      21.564 -23.786  58.635  1.00 26.02
ATOM   15526  CG1 ILE  2312      20.100 -21.773  58.932  1.00 27.58
ATOM   15527  CD1 ILE  2312      20.741 -20.666  58.103  1.00 29.83
ATOM   15528  C   ILE  2312      19.342 -24.292  60.477  1.00 27.16
ATOM   15529  O   ILE  2312      19.570 -25.481  60.251  1.00 28.46
ATOM   15530  N   LEU  2313      18.120 -23.774  60.419  1.00 27.96
ATOM   15531  CA  LEU  2313      16.981 -24.604  60.058  1.00 29.89
ATOM   15532  CB  LEU  2313      16.438 -25.308  61.299  1.00 32.34
ATOM   15533  CG  LEU  2313      16.079 -26.791  61.172  1.00 36.07
ATOM   15534  CD1 LEU  2313      15.437 -27.236  62.479  1.00 36.26
ATOM   15535  CD2 LEU  2313      15.130 -27.027  60.000  1.00 35.23
ATOM   15536  C   LEU  2313      15.877 -23.765  59.434  1.00 29.08
ATOM   15537  O   LEU  2313      15.752 -22.578  59.735  1.00 26.94
ATOM   15538  N   VAL  2314      15.088 -24.386  58.558  1.00 28.13
ATOM   15539  CA  VAL  2314      13.984 -23.699  57.902  1.00 26.96
ATOM   15540  CB  VAL  2314      13.493 -24.457  56.647  1.00 28.27
ATOM   15541  CG1 VAL  2314      12.350 -23.692  55.999  1.00 28.30
ATOM   15542  CG2 VAL  2314      14.638 -24.638  55.666  1.00 28.58
ATOM   15543  C   VAL  2314      12.837 -23.628  58.899  1.00 25.72
ATOM   15544  O   VAL  2314      12.331 -24.654  59.350  1.00 25.30
ATOM   15545  N   MET  2315      12.444 -22.411  59.249  1.00 25.28
ATOM   15546  CA  MET  2315      11.367 -22.196  60.205  1.00 22.98
ATOM   15547  CB  MET  2315      11.025 -20.711  60.278  1.00 20.69
ATOM   15548  CG  MET  2315      10.539 -20.145  58.960  1.00 20.27
ATOM   15549  SD  MET  2315       9.305 -18.854  59.197  1.00 19.44
ATOM   15550  CE  MET  2315       7.864 -19.873  59.416  1.00 17.93
ATOM   15551  C   MET  2315      10.103 -22.996  59.876  1.00 22.84
ATOM   15552  O   MET  2315       9.407 -23.463  60.776  1.00 24.09
ATOM   15553  N   HIS  2316       9.807 -23.162  58.591  1.00 23.24
ATOM   15554  CA  HIS  2316       8.616 -23.903  58.180  1.00 22.87
ATOM   15555  CB  HIS  2316       8.445 -23.796  56.662  1.00 21.29
ATOM   15556  CG  HIS  2316       7.970 -22.449  56.216  1.00 20.22
ATOM   15557  CD2 HIS  2316       8.651 -21.318  55.913  1.00 17.37
ATOM   15558  ND1 HIS  2316       6.633 -22.120  56.152  1.00 20.75
ATOM   15559  CE1 HIS  2316       6.511 -20.844  55.833  1.00 20.50
ATOM   15560  NE2 HIS  2316       7.721 -20.333  55.684  1.00 20.64
ATOM   15561  C   HIS  2316       8.612 -25.360  58.634  1.00 24.41
ATOM   15562  O   HIS  2316       7.551 -25.965  58.787  1.00 23.54
ATOM   15563  N   ASP  2317       9.790 -25.936  58.845  1.00 25.53
ATOM   15564  CA  ASP  2317       9.850 -27.313  59.330  1.00 27.90
ATOM   15565  CB  ASP  2317      11.101 -28.029  58.813  1.00 31.10
ATOM   15566  CG  ASP  2317      10.984 -28.436  57.358  1.00 32.92
ATOM   15567  OD1 ASP  2317       9.936 -29.002  56.979  1.00 36.68
ATOM   15568  OD2 ASP  2317      11.944 -28.205  56.598  1.00 35.40
ATOM   15569  C   ASP  2317       9.874 -27.291  60.857  1.00 27.46
ATOM   15570  O   ASP  2317       9.268 -28.140  61.512  1.00 28.41
ATOM   15571  N   ALA  2318      10.571 -26.304  61.410  1.00 28.19
ATOM   15572  CA  ALA  2318      10.703 -26.154  62.853  1.00 29.17
ATOM   15573  CB  ALA  2318      11.566 -24.946  63.167  1.00 31.06
ATOM   15574  C   ALA  2318       9.357 -26.025  63.553  1.00 30.52
ATOM   15575  O   ALA  2318       9.230 -26.371  64.727  1.00 30.59
ATOM   15576  N   PHE  2319       8.355 -25.526  62.834  1.00 29.73
ATOM   15577  CA  PHE  2319       7.029 -25.357  63.416  1.00 29.63
ATOM   15578  CB  PHE  2319       6.545 -23.917  63.234  1.00 29.46
ATOM   15579  CG  PHE  2319       7.529 -22.886  63.711  1.00 31.82
ATOM   15580  CD1 PHE  2319       8.150 -23.020  64.950  1.00 32.14
ATOM   15581  CD2 PHE  2319       7.827 -21.778  62.928  1.00 32.09
ATOM   15582  CE1 PHE  2319       9.056 -22.067  65.398  1.00 32.92
```

```
ATOM   15583  CE2 PHE  2319       8.731 -20.818  63.366  1.00 32.42
ATOM   15584  CZ  PHE  2319       9.347 -20.963  64.606  1.00 33.77
ATOM   15585  C   PHE  2319       6.017 -26.318  62.818  1.00 28.48
ATOM   15586  O   PHE  2319       4.811 -26.115  62.941  1.00 29.39
ATOM   15587  N   GLY  2320       6.515 -27.368  62.175  1.00 30.40
ATOM   15588  CA  GLY  2320       5.639 -28.357  61.573  1.00 29.32
ATOM   15589  C   GLY  2320       4.618 -27.800  60.597  1.00 28.92
ATOM   15590  O   GLY  2320       3.574 -28.410  60.380  1.00 28.53
ATOM   15591  N   ILE  2321       4.915 -26.647  60.003  1.00 28.40
ATOM   15592  CA  ILE  2321       4.001 -26.029  59.047  1.00 28.56
ATOM   15593  CB  ILE  2321       4.425 -24.573  58.729  1.00 26.93
ATOM   15594  CG2 ILE  2321       3.532 -23.991  57.646  1.00 28.95
ATOM   15595  CG1 ILE  2321       4.342 -23.721  60.001  1.00 27.13
ATOM   15596  CD1 ILE  2321       4.875 -22.326  59.854  1.00 23.13
ATOM   15597  C   ILE  2321       3.946 -26.823  57.746  1.00 30.05
ATOM   15598  O   ILE  2321       2.876 -27.052  57.190  1.00 28.53
ATOM   15599  N   THR  2322       5.106 -27.249  57.264  1.00 32.75
ATOM   15600  CA  THR  2322       5.163 -28.000  56.021  1.00 37.43
ATOM   15601  CB  THR  2322       6.567 -27.946  55.417  1.00 38.04
ATOM   15602  OG1 THR  2322       7.450 -28.764  56.190  1.00 41.53
ATOM   15603  CG2 THR  2322       7.084 -26.520  55.431  1.00 36.66
ATOM   15604  C   THR  2322       4.775 -29.454  56.242  1.00 40.21
ATOM   15605  O   THR  2322       5.297 -30.112  57.143  1.00 40.84
ATOM   15606  N   GLY  2323       3.853 -29.942  55.415  1.00 43.61
ATOM   15607  CA  GLY  2323       3.395 -31.320  55.509  1.00 48.35
ATOM   15608  C   GLY  2323       3.586 -31.967  56.868  1.00 51.33
ATOM   15609  O   GLY  2323       3.286 -31.368  57.903  1.00 51.84
ATOM   15610  N   GLY  2324       4.090 -33.196  56.867  1.00 53.18
ATOM   15611  CA  GLY  2324       4.309 -33.900  58.116  1.00 54.96
ATOM   15612  C   GLY  2324       5.535 -34.783  58.065  1.00 56.02
ATOM   15613  O   GLY  2324       5.938 -35.358  59.076  1.00 57.03
ATOM   15614  N   HIS  2325       6.132 -34.889  56.884  1.00 56.32
ATOM   15615  CA  HIS  2325       7.322 -35.710  56.701  1.00 56.49
ATOM   15616  CB  HIS  2325       7.148 -36.604  55.475  1.00 58.75
ATOM   15617  CG  HIS  2325       5.979 -37.532  55.571  1.00 61.46
ATOM   15618  CD2 HIS  2325       4.882 -37.670  54.788  1.00 62.32
ATOM   15619  ND1 HIS  2325       5.852 -38.467  56.576  1.00 62.35
ATOM   15620  CE1 HIS  2325       4.728 -39.141  56.408  1.00 63.14
ATOM   15621  NE2 HIS  2325       4.121 -38.677  55.330  1.00 63.31
ATOM   15622  C   HIS  2325       8.572 -34.852  56.543  1.00 55.31
ATOM   15623  O   HIS  2325       9.174 -34.805  55.470  1.00 55.03
ATOM   15624  N   ILE  2326       8.959 -34.177  57.622  1.00 53.27
ATOM   15625  CA  ILE  2326      10.137 -33.318  57.608  1.00 50.77
ATOM   15626  CB  ILE  2326      10.230 -32.483  58.898  1.00 50.89
ATOM   15627  CG2 ILE  2326       8.991 -31.612  59.043  1.00 50.89
ATOM   15628  CG1 ILE  2326      10.380 -33.408  60.107  1.00 51.06
ATOM   15629  CD1 ILE  2326      10.620 -32.672  61.410  1.00 50.63
ATOM   15630  C   ILE  2326      11.408 -34.151  57.473  1.00 48.48
ATOM   15631  O   ILE  2326      11.400 -35.356  57.722  1.00 48.12
ATOM   15632  N   PRO  2327      12.523 -33.517  57.076  1.00 46.61
ATOM   15633  CD  PRO  2327      12.695 -32.092  56.746  1.00 46.53
ATOM   15634  CA  PRO  2327      13.785 -34.247  56.923  1.00 45.07
ATOM   15635  CB  PRO  2327      14.710 -33.205  56.296  1.00 45.91
ATOM   15636  CG  PRO  2327      14.194 -31.918  56.854  1.00 46.83
ATOM   15637  C   PRO  2327      14.317 -34.796  58.245  1.00 43.14
ATOM   15638  O   PRO  2327      13.982 -34.292  59.318  1.00 42.61
ATOM   15639  N   LYS  2328      15.144 -35.833  58.163  1.00 41.21
ATOM   15640  CA  LYS  2328      15.716 -36.455  59.354  1.00 38.78
ATOM   15641  CB  LYS  2328      16.536 -37.692  58.967  1.00 41.48
ATOM   15642  CG  LYS  2328      15.696 -38.917  58.617  1.00 45.03
ATOM   15643  CD  LYS  2328      14.760 -38.644  57.447  1.00 47.19
ATOM   15644  CE  LYS  2328      13.770 -39.779  57.245  1.00 48.48
ATOM   15645  NZ  LYS  2328      12.793 -39.463  56.165  1.00 49.27
ATOM   15646  C   LYS  2328      16.583 -35.513  60.181  1.00 35.61
ATOM   15647  O   LYS  2328      16.774 -35.732  61.376  1.00 34.87
ATOM   15648  N   PHE  2329      17.102 -34.463  59.553  1.00 31.28
ATOM   15649  CA  PHE  2329      17.955 -33.514  60.262  1.00 28.57
ATOM   15650  CB  PHE  2329      19.028 -32.967  59.315  1.00 28.07
ATOM   15651  CG  PHE  2329      18.480 -32.290  58.089  1.00 29.05
ATOM   15652  CD1 PHE  2329      17.954 -31.004  58.157  1.00 28.21
ATOM   15653  CD2 PHE  2329      18.506 -32.935  56.857  1.00 29.00
ATOM   15654  CE1 PHE  2329      17.470 -30.367  57.011  1.00 28.14
ATOM   15655  CE2 PHE  2329      18.026 -32.309  55.708  1.00 28.09
ATOM   15656  CZ  PHE  2329      17.506 -31.023  55.785  1.00 29.29
ATOM   15657  C   PHE  2329      17.179 -32.365  60.896  1.00 26.22
ATOM   15658  O   PHE  2329      17.734 -31.568  61.649  1.00 24.18
ATOM   15659  N   ALA  2330      15.888 -32.288  60.597  1.00 26.36
```

```
ATOM   15660  CA  ALA  2330     15.051 -31.225  61.133  1.00 25.12
ATOM   15661  CB  ALA  2330     14.109 -30.721  60.048  1.00 24.79
ATOM   15662  C   ALA  2330     14.250 -31.701  62.336  1.00 25.45
ATOM   15663  O   ALA  2330     14.066 -32.900  62.540  1.00 26.65
ATOM   15664  N   LYS  2331     13.761 -30.751  63.123  1.00 25.57
ATOM   15665  CA  LYS  2331     12.966 -31.068  64.299  1.00 25.38
ATOM   15666  CB  LYS  2331     13.861 -31.093  65.541  1.00 26.54
ATOM   15667  CG  LYS  2331     13.128 -31.323  66.853  1.00 27.14
ATOM   15668  CD  LYS  2331     14.114 -31.421  68.013  1.00 27.67
ATOM   15669  CE  LYS  2331     13.404 -31.585  69.352  1.00 28.98
ATOM   15670  NZ  LYS  2331     14.389 -31.782  70.465  1.00 25.48
ATOM   15671  C   LYS  2331     11.845 -30.051  64.486  1.00 24.96
ATOM   15672  O   LYS  2331     12.060 -28.842  64.371  1.00 23.50
ATOM   15673  N   ASN  2332     10.647 -30.553  64.758  1.00 24.26
ATOM   15674  CA  ASN  2332      9.488 -29.697  64.981  1.00 23.93
ATOM   15675  CB  ASN  2332      8.197 -30.456  64.641  1.00 23.26
ATOM   15676  CG  ASN  2332      6.941 -29.655  64.953  1.00 22.69
ATOM   15677  OD1 ASN  2332      7.009 -28.540  65.474  1.00 23.56
ATOM   15678  ND2 ASN  2332      5.788 -30.226  64.641  1.00 23.07
ATOM   15679  C   ASN  2332      9.469 -29.286  66.446  1.00 23.54
ATOM   15680  O   ASN  2332      9.098 -30.076  67.311  1.00 25.07
ATOM   15681  N   PHE  2333      9.874 -28.054  66.728  1.00 25.71
ATOM   15682  CA  PHE  2333      9.894 -27.567  68.103  1.00 26.02
ATOM   15683  CB  PHE  2333     10.884 -26.411  68.245  1.00 27.67
ATOM   15684  CG  PHE  2333     12.317 -26.826  68.102  1.00 25.56
ATOM   15685  CD1 PHE  2333     12.885 -26.981  66.846  1.00 24.93
ATOM   15686  CD2 PHE  2333     13.091 -27.086  69.224  1.00 25.58
ATOM   15687  CE1 PHE  2333     14.210 -27.392  66.706  1.00 25.54
ATOM   15688  CE2 PHE  2333     14.416 -27.498  69.098  1.00 27.73
ATOM   15689  CZ  PHE  2333     14.972 -27.649  67.836  1.00 24.35
ATOM   15690  C   PHE  2333      8.529 -27.126  68.606  1.00 28.07
ATOM   15691  O   PHE  2333      8.295 -27.112  69.812  1.00 26.50
ATOM   15692  N   LEU  2334      7.633 -26.759  67.693  1.00 28.99
ATOM   15693  CA  LEU  2334      6.296 -26.330  68.095  1.00 30.49
ATOM   15694  CB  LEU  2334      5.497 -25.820  66.889  1.00 28.12
ATOM   15695  CG  LEU  2334      4.023 -25.483  67.170  1.00 27.45
ATOM   15696  CD1 LEU  2334      3.933 -24.502  68.323  1.00 24.55
ATOM   15697  CD2 LEU  2334      3.363 -24.897  65.924  1.00 25.02
ATOM   15698  C   LEU  2334      5.548 -27.485  68.751  1.00 32.07
ATOM   15699  O   LEU  2334      4.865 -27.297  69.757  1.00 32.09
ATOM   15700  N   ALA  2335      5.688 -28.678  68.177  1.00 35.05
ATOM   15701  CA  ALA  2335      5.030 -29.877  68.694  1.00 38.84
ATOM   15702  CB  ALA  2335      5.356 -31.072  67.810  1.00 38.92
ATOM   15703  C   ALA  2335      5.452 -30.162  70.130  1.00 41.82
ATOM   15704  O   ALA  2335      4.646 -30.605  70.950  1.00 42.61
ATOM   15705  N   GLU  2336      6.723 -29.907  70.424  1.00 45.17
ATOM   15706  CA  GLU  2336      7.273 -30.115  71.761  1.00 48.42
ATOM   15707  CB  GLU  2336      8.790 -29.899  71.741  1.00 50.16
ATOM   15708  CG  GLU  2336      9.571 -30.928  70.936  1.00 52.50
ATOM   15709  CD  GLU  2336      9.730 -32.246  71.666  1.00 53.36
ATOM   15710  OE1 GLU  2336      8.701 -32.871  72.005  1.00 54.49
ATOM   15711  OE2 GLU  2336     10.888 -32.655  71.906  1.00 54.14
ATOM   15712  C   GLU  2336      6.639 -29.130  72.739  1.00 49.37
ATOM   15713  O   GLU  2336      6.895 -29.184  73.941  1.00 49.41
ATOM   15714  N   THR  2337      5.816 -28.228  72.211  1.00 49.87
ATOM   15715  CA  THR  2337      5.150 -27.220  73.026  1.00 49.76
ATOM   15716  CB  THR  2337      6.024 -25.946  73.137  1.00 50.97
ATOM   15717  OG1 THR  2337      5.387 -24.995  74.000  1.00 52.74
ATOM   15718  CG2 THR  2337      6.235 -25.319  71.764  1.00 51.29
ATOM   15719  C   THR  2337      3.793 -26.853  72.424  1.00 48.80
ATOM   15720  O   THR  2337      3.150 -27.676  71.768  1.00 48.94
ATOM   15721  N   GLY  2338      3.356 -25.619  72.651  1.00 47.93
ATOM   15722  CA  GLY  2338      2.080 -25.178  72.114  1.00 45.01
ATOM   15723  C   GLY  2338      2.136 -23.730  71.680  1.00 43.22
ATOM   15724  O   GLY  2338      1.137 -23.163  71.243  1.00 43.86
ATOM   15725  N   ASP  2339      3.317 -23.134  71.795  1.00 40.41
ATOM   15726  CA  ASP  2339      3.518 -21.739  71.426  1.00 38.45
ATOM   15727  CB  ASP  2339      3.672 -20.895  72.696  1.00 40.39
ATOM   15728  CG  ASP  2339      3.966 -19.444  72.402  1.00 43.35
ATOM   15729  OD1 ASP  2339      5.137 -19.121  72.115  1.00 42.97
ATOM   15730  OD2 ASP  2339      3.018 -18.624  72.448  1.00 45.56
ATOM   15731  C   ASP  2339      4.749 -21.598  70.535  1.00 35.60
ATOM   15732  O   ASP  2339      5.797 -22.194  70.800  1.00 33.62
ATOM   15733  N   ILE  2340      4.618 -20.810  69.474  1.00 32.17
ATOM   15734  CA  ILE  2340      5.722 -20.606  68.540  1.00 29.10
ATOM   15735  CB  ILE  2340      5.268 -19.753  67.333  1.00 28.53
ATOM   15736  CG2 ILE  2340      6.447 -19.496  66.400  1.00 26.40
```

```
ATOM  15737  CG1 ILE  2340      4.143 -20.477  66.587  1.00 27.31
ATOM  15738  CD1 ILE  2340      3.507 -19.653  65.474  1.00 27.21
ATOM  15739  C   ILE  2340      6.930 -19.945  69.202  1.00 27.86
ATOM  15740  O   ILE  2340      8.064 -20.405  69.045  1.00 27.30
ATOM  15741  N   ARG  2341      6.693 -18.867  69.942  1.00 25.33
ATOM  15742  CA  ARG  2341      7.788 -18.180  70.611  1.00 24.52
ATOM  15743  CB  ARG  2341      7.268 -16.927  71.323  1.00 23.55
ATOM  15744  CG  ARG  2341      6.902 -15.805  70.349  1.00 24.38
ATOM  15745  CD  ARG  2341      6.378 -14.561  71.051  1.00 27.22
ATOM  15746  NE  ARG  2341      6.060 -13.502  70.091  1.00 27.15
ATOM  15747  CZ  ARG  2341      5.076 -13.577  69.200  1.00 28.36
ATOM  15748  NH1 ARG  2341      4.308 -14.657  69.149  1.00 26.92
ATOM  15749  NH2 ARG  2341      4.871 -12.578  68.354  1.00 27.62
ATOM  15750  C   ARG  2341      8.499 -19.116  71.584  1.00 24.05
ATOM  15751  O   ARG  2341      9.713 -19.030  71.753  1.00 23.07
ATOM  15752  N   ALA  2342      7.742 -20.019  72.202  1.00 23.18
ATOM  15753  CA  ALA  2342      8.307 -20.987  73.138  1.00 24.94
ATOM  15754  CB  ALA  2342      7.194 -21.728  73.858  1.00 24.89
ATOM  15755  C   ALA  2342      9.179 -21.973  72.367  1.00 24.76
ATOM  15756  O   ALA  2342     10.204 -22.436  72.865  1.00 25.19
ATOM  15757  N   ALA  2343      8.755 -22.291  71.145  1.00 22.90
ATOM  15758  CA  ALA  2343      9.485 -23.210  70.281  1.00 21.20
ATOM  15759  CB  ALA  2343      8.648 -23.541  69.049  1.00 23.10
ATOM  15760  C   ALA  2343     10.810 -22.574  69.869  1.00 20.25
ATOM  15761  O   ALA  2343     11.840 -23.246  69.810  1.00 19.96
ATOM  15762  N   VAL  2344     10.774 -21.273  69.586  1.00 20.13
ATOM  15763  CA  VAL  2344     11.964 -20.530  69.203  1.00 20.13
ATOM  15764  CB  VAL  2344     11.612 -19.069  68.829  1.00 19.76
ATOM  15765  CG1 VAL  2344     12.883 -18.263  68.605  1.00 21.02
ATOM  15766  CG2 VAL  2344     10.751 -19.057  67.560  1.00 21.33
ATOM  15767  C   VAL  2344     12.983 -20.528  70.343  1.00 20.91
ATOM  15768  O   VAL  2344     14.186 -20.685  70.115  1.00 18.15
ATOM  15769  N   ARG  2345     12.504 -20.367  71.572  1.00 21.37
ATOM  15770  CA  ARG  2345     13.400 -20.354  72.721  1.00 23.97
ATOM  15771  CB  ARG  2345     12.664 -19.858  73.968  1.00 24.17
ATOM  15772  CG  ARG  2345     12.197 -18.414  73.882  1.00 24.76
ATOM  15773  CD  ARG  2345     11.797 -17.895  75.260  1.00 25.91
ATOM  15774  NE  ARG  2345     10.763 -18.723  75.872  1.00 27.57
ATOM  15775  CZ  ARG  2345      9.465 -18.611  75.617  1.00 28.92
ATOM  15776  NH1 ARG  2345      9.027 -17.698  74.758  1.00 28.97
ATOM  15777  NH2 ARG  2345      8.604 -19.417  76.218  1.00 30.22
ATOM  15778  C   ARG  2345     13.986 -21.742  72.974  1.00 25.12
ATOM  15779  O   ARG  2345     15.155 -21.870  73.337  1.00 26.08
ATOM  15780  N   GLN  2346     13.179 -22.778  72.772  1.00 24.82
ATOM  15781  CA  GLN  2346     13.649 -24.137  72.980  1.00 25.54
ATOM  15782  CB  GLN  2346     12.505 -25.133  72.822  1.00 27.18
ATOM  15783  CG  GLN  2346     12.832 -26.509  73.367  1.00 32.29
ATOM  15784  CD  GLN  2346     11.790 -27.544  72.996  1.00 35.43
ATOM  15785  OE1 GLN  2346     10.589 -27.269  73.029  1.00 38.83
ATOM  15786  NE2 GLN  2346     12.242 -28.746  72.648  1.00 36.41
ATOM  15787  C   GLN  2346     14.753 -24.461  71.974  1.00 25.43
ATOM  15788  O   GLN  2346     15.747 -25.104  72.309  1.00 24.79
ATOM  15789  N   TYR  2347     14.571 -24.008  70.738  1.00 24.34
ATOM  15790  CA  TYR  2347     15.555 -24.230  69.685  1.00 24.09
ATOM  15791  CB  TYR  2347     15.043 -23.659  68.358  1.00 24.72
ATOM  15792  CG  TYR  2347     16.087 -23.560  67.259  1.00 24.42
ATOM  15793  CD1 TYR  2347     16.883 -24.656  66.919  1.00 25.35
ATOM  15794  CE1 TYR  2347     17.814 -24.580  65.878  1.00 23.82
ATOM  15795  CD2 TYR  2347     16.248 -22.378  66.533  1.00 23.75
ATOM  15796  CE2 TYR  2347     17.174 -22.290  65.489  1.00 24.65
ATOM  15797  CZ  TYR  2347     17.952 -23.397  65.169  1.00 24.72
ATOM  15798  OH  TYR  2347     18.864 -23.316  64.135  1.00 24.29
ATOM  15799  C   TYR  2347     16.872 -23.569  70.052  1.00 24.13
ATOM  15800  O   TYR  2347     17.933 -24.175  69.930  1.00 23.75
ATOM  15801  N   MET  2348     16.799 -22.320  70.501  1.00 24.26
ATOM  15802  CA  MET  2348     17.996 -21.575  70.887  1.00 25.61
ATOM  15803  CB  MET  2348     17.606 -20.179  71.376  1.00 26.13
ATOM  15804  CG  MET  2348     17.038 -19.273  70.298  1.00 26.95
ATOM  15805  SD  MET  2348     16.196 -17.821  70.988  1.00 30.86
ATOM  15806  CE  MET  2348     17.540 -17.070  71.910  1.00 28.64
ATOM  15807  C   MET  2348     18.748 -22.305  71.990  1.00 25.38
ATOM  15808  O   MET  2348     19.973 -22.437  71.944  1.00 23.27
ATOM  15809  N   ALA  2349     17.993 -22.782  72.973  1.00 25.63
ATOM  15810  CA  ALA  2349     18.546 -23.490  74.121  1.00 26.87
ATOM  15811  CB  ALA  2349     17.452 -23.694  75.165  1.00 26.84
ATOM  15812  C   ALA  2349     19.189 -24.832  73.784  1.00 27.52
ATOM  15813  O   ALA  2349     20.325 -25.094  74.176  1.00 27.80
```

```
ATOM   15814  N    GLU   2350       18.461 -25.681  73.065  1.00 27.55
ATOM   15815  CA   GLU   2350       18.982 -26.998  72.715  1.00 28.05
ATOM   15816  CB   GLU   2350       17.908 -27.832  72.020  1.00 27.67
ATOM   15817  CG   GLU   2350       16.646 -28.041  72.838  1.00 30.51
ATOM   15818  CD   GLU   2350       15.822 -29.206  72.325  1.00 30.48
ATOM   15819  OE1  GLU   2350       15.869 -29.475  71.108  1.00 32.21
ATOM   15820  OE2  GLU   2350       15.124 -29.849  73.135  1.00 33.22
ATOM   15821  C    GLU   2350       20.233 -26.937  71.844  1.00 28.06
ATOM   15822  O    GLU   2350       21.058 -27.849  71.877  1.00 26.63
ATOM   15823  N    VAL   2351       20.375 -25.873  71.060  1.00 28.58
ATOM   15824  CA   VAL   2351       21.548 -25.732  70.210  1.00 28.48
ATOM   15825  CB   VAL   2351       21.364 -24.605  69.162  1.00 29.53
ATOM   15826  CG1  VAL   2351       22.678 -24.341  68.438  1.00 28.56
ATOM   15827  CG2  VAL   2351       20.291 -25.003  68.162  1.00 26.63
ATOM   15828  C    VAL   2351       22.751 -25.406  71.091  1.00 30.61
ATOM   15829  O    VAL   2351       23.787 -26.061  71.009  1.00 29.24
ATOM   15830  N    GLU   2352       22.597 -24.404  71.951  1.00 31.03
ATOM   15831  CA   GLU   2352       23.676 -23.997  72.840  1.00 33.56
ATOM   15832  CB   GLU   2352       23.245 -22.796  73.681  1.00 34.00
ATOM   15833  CG   GLU   2352       24.353 -22.236  74.554  1.00 38.30
ATOM   15834  CD   GLU   2352       23.923 -21.011  75.328  1.00 40.92
ATOM   15835  OE1  GLU   2352       24.747 -20.485  76.109  1.00 42.56
ATOM   15836  OE2  GLU   2352       22.765 -20.571  75.159  1.00 42.53
ATOM   15837  C    GLU   2352       24.108 -25.137  73.760  1.00 34.18
ATOM   15838  O    GLU   2352       25.286 -25.266  74.090  1.00 34.72
ATOM   15839  N    SER   2353       23.149 -25.963  74.166  1.00 33.74
ATOM   15840  CA   SER   2353       23.428 -27.085  75.051  1.00 34.92
ATOM   15841  CB   SER   2353       22.166 -27.483  75.815  1.00 35.44
ATOM   15842  OG   SER   2353       21.737 -26.429  76.657  1.00 42.27
ATOM   15843  C    SER   2353       23.952 -28.299  74.299  1.00 34.42
ATOM   15844  O    SER   2353       24.568 -29.186  74.889  1.00 33.68
ATOM   15845  N    GLY   2354       23.703 -28.338  72.995  1.00 32.46
ATOM   15846  CA   GLY   2354       24.150 -29.463  72.198  1.00 31.21
ATOM   15847  C    GLY   2354       23.068 -30.518  72.070  1.00 30.92
ATOM   15848  O    GLY   2354       23.251 -31.517  71.373  1.00 31.34
ATOM   15849  N    VAL   2355       21.941 -30.301  72.747  1.00 29.25
ATOM   15850  CA   VAL   2355       20.814 -31.235  72.702  1.00 29.20
ATOM   15851  CB   VAL   2355       19.627 -30.718  73.547  1.00 29.10
ATOM   15852  CG1  VAL   2355       18.484 -31.725  73.510  1.00 29.45
ATOM   15853  CG2  VAL   2355       20.077 -30.467  74.976  1.00 32.59
ATOM   15854  C    VAL   2355       20.336 -31.413  71.264  1.00 27.59
ATOM   15855  O    VAL   2355       19.911 -32.498  70.863  1.00 26.05
ATOM   15856  N    TYR   2356       20.399 -30.330  70.498  1.00 28.08
ATOM   15857  CA   TYR   2356       19.992 -30.352  69.099  1.00 26.36
ATOM   15858  CB   TYR   2356       18.713 -29.543  68.889  1.00 25.86
ATOM   15859  CG   TYR   2356       18.309 -29.492  67.436  1.00 25.65
ATOM   15860  CD1  TYR   2356       17.733 -30.602  66.817  1.00 25.65
ATOM   15861  CE1  TYR   2356       17.433 -30.596  65.463  1.00 25.60
ATOM   15862  CD2  TYR   2356       18.569 -28.363  66.659  1.00 24.57
ATOM   15863  CE2  TYR   2356       18.271 -28.345  65.299  1.00 24.48
ATOM   15864  CZ   TYR   2356       17.705 -29.466  64.708  1.00 25.02
ATOM   15865  OH   TYR   2356       17.423 -29.471  63.361  1.00 25.86
ATOM   15866  C    TYR   2356       21.099 -29.749  68.245  1.00 27.03
ATOM   15867  O    TYR   2356       21.644 -28.695  68.580  1.00 26.04
ATOM   15868  N    PRO   2357       21.437 -30.405  67.124  1.00 29.12
ATOM   15869  CD   PRO   2357       22.345 -29.867  66.094  1.00 29.21
ATOM   15870  CA   PRO   2357       20.815 -31.650  66.668  1.00 30.27
ATOM   15871  CB   PRO   2357       21.151 -31.672  65.182  1.00 30.86
ATOM   15872  CG   PRO   2357       22.494 -31.034  65.145  1.00 30.20
ATOM   15873  C    PRO   2357       21.331 -32.886  67.397  1.00 32.19
ATOM   15874  O    PRO   2357       22.491 -32.943  67.804  1.00 31.74
ATOM   15875  N    GLY   2358       20.456 -33.870  67.565  1.00 33.64
ATOM   15876  CA   GLY   2358       20.849 -35.094  68.236  1.00 35.88
ATOM   15877  C    GLY   2358       21.322 -36.113  67.222  1.00 36.96
ATOM   15878  O    GLY   2358       21.388 -35.816  66.030  1.00 34.73
ATOM   15879  N    GLU   2359       21.652 -37.313  67.688  1.00 38.39
ATOM   15880  CA   GLU   2359       22.114 -38.369  66.795  1.00 40.49
ATOM   15881  CB   GLU   2359       22.507 -39.612  67.598  1.00 42.44
ATOM   15882  CG   GLU   2359       22.814 -40.830  66.733  1.00 45.21
ATOM   15883  CD   GLU   2359       23.978 -40.605  65.786  1.00 46.88
ATOM   15884  OE1  GLU   2359       24.082 -41.352  64.786  1.00 47.42
ATOM   15885  OE2  GLU   2359       24.792 -39.691  66.045  1.00 48.14
ATOM   15886  C    GLU   2359       21.031 -38.731  65.785  1.00 41.07
ATOM   15887  O    GLU   2359       21.328 -39.164  64.669  1.00 40.53
ATOM   15888  N    GLU   2360       19.773 -38.548  66.180  1.00 40.84
ATOM   15889  CA   GLU   2360       18.647 -38.862  65.302  1.00 41.55
ATOM   15890  CB   GLU   2360       17.321 -38.762  66.069  1.00 43.54
```

```
ATOM   15891  CG   GLU   2360      17.420 -39.113  67.543  1.00 47.07
ATOM   15892  CD   GLU   2360      17.895 -37.944  68.389  1.00 48.49
ATOM   15893  OE1  GLU   2360      17.123 -36.972  68.545  1.00 48.54
ATOM   15894  OE2  GLU   2360      19.040 -37.993  68.890  1.00 49.09
ATOM   15895  C    GLU   2360      18.600 -37.912  64.109  1.00 40.20
ATOM   15896  O    GLU   2360      18.018 -38.231  63.073  1.00 40.08
ATOM   15897  N    HIS   2361      19.224 -36.748  64.261  1.00 38.76
ATOM   15898  CA   HIS   2361      19.236 -35.735  63.210  1.00 37.83
ATOM   15899  CB   HIS   2361      18.893 -34.368  63.809  1.00 37.62
ATOM   15900  CG   HIS   2361      17.711 -34.387  64.727  1.00 37.85
ATOM   15901  CD2  HIS   2361      17.616 -34.163  66.060  1.00 37.85
ATOM   15902  ND1  HIS   2361      16.436 -34.685  64.298  1.00 37.99
ATOM   15903  CE1  HIS   2361      15.607 -34.644  65.325  1.00 37.41
ATOM   15904  NE2  HIS   2361      16.297 -34.329  66.406  1.00 37.44
ATOM   15905  C    HIS   2361      20.588 -35.639  62.514  1.00 37.16
ATOM   15906  O    HIS   2361      20.815 -34.739  61.704  1.00 35.47
ATOM   15907  N    SER   2362      21.479 -36.569  62.829  1.00 37.15
ATOM   15908  CA   SER   2362      22.814 -36.561  62.251  1.00 37.47
ATOM   15909  CB   SER   2362      23.845 -36.519  63.376  1.00 37.24
ATOM   15910  OG   SER   2362      23.557 -35.456  64.274  1.00 38.09
ATOM   15911  C    SER   2362      23.087 -37.757  61.342  1.00 38.18
ATOM   15912  O    SER   2362      22.511 -38.831  61.519  1.00 37.89
ATOM   15913  N    PHE   2363      23.966 -37.559  60.363  1.00 38.60
ATOM   15914  CA   PHE   2363      24.333 -38.617  59.429  1.00 39.77
ATOM   15915  CB   PHE   2363      24.257 -38.119  57.983  1.00 39.50
ATOM   15916  CG   PHE   2363      22.932 -37.524  57.613  1.00 39.62
ATOM   15917  CD1  PHE   2363      22.689 -36.168  57.797  1.00 40.24
ATOM   15918  CD2  PHE   2363      21.923 -38.318  57.083  1.00 39.74
ATOM   15919  CE1  PHE   2363      21.461 -35.608  57.455  1.00 41.07
ATOM   15920  CE2  PHE   2363      20.690 -37.769  56.737  1.00 40.32
ATOM   15921  CZ   PHE   2363      20.459 -36.410  56.924  1.00 40.17
ATOM   15922  C    PHE   2363      25.756 -39.089  59.719  1.00 40.49
ATOM   15923  O    PHE   2363      26.502 -38.428  60.442  1.00 39.62
ATOM   15924  N    HIS   2364      26.129 -40.228  59.145  1.00 41.96
ATOM   15925  CA   HIS   2364      27.462 -40.791  59.336  1.00 44.57
ATOM   15926  CB   HIS   2364      27.468 -41.742  60.532  1.00 44.77
ATOM   15927  CG   HIS   2364      27.333 -41.053  61.852  1.00 44.87
ATOM   15928  CD2  HIS   2364      26.330 -41.057  62.762  1.00 45.16
ATOM   15929  ND1  HIS   2364      28.310 -40.227  62.363  1.00 45.32
ATOM   15930  CE1  HIS   2364      27.916 -39.752  63.531  1.00 45.82
ATOM   15931  NE2  HIS   2364      26.718 -40.241  63.796  1.00 45.37
ATOM   15932  C    HIS   2364      27.935 -41.537  58.092  1.00 45.86
ATOM   15933  O    HIS   2364      29.117 -41.375  57.723  1.00 47.15
ATOM   15934  OXT  HIS   2364      27.124 -42.291  57.514  1.00 48.19
ATOM   15935  C1   KPL   2365      18.263 -24.454  54.329  1.00 39.29
ATOM   15936  C2   KPL   2365      19.445 -23.498  54.099  1.00 40.45
ATOM   15937  C3   KPL   2365      19.514 -22.489  55.256  1.00 40.25
ATOM   15938  C4   KPL   2365      20.756 -24.301  54.085  1.00 41.68
ATOM   15939  O1   KPL   2365      20.736 -25.261  53.017  1.00 44.61
ATOM   15940  C5   KPL   2365      19.261 -22.740  52.762  1.00 39.00
ATOM   15941  O2   KPL   2365      20.101 -22.834  51.890  1.00 40.74
ATOM   15942  C6   KPL   2365      18.054 -21.873  52.491  1.00 37.37
ATOM   15943  O3   KPL   2365      17.180 -21.735  53.324  1.00 37.05
ATOM   15944  O4   KPL   2365      17.942 -21.245  51.309  1.00 32.80
ATOM   15945  CB   MET   2401      40.796  32.161  43.908  1.00 71.21
ATOM   15946  CG   MET   2401      41.476  32.073  42.556  1.00 72.09
ATOM   15947  SD   MET   2401      42.294  33.600  42.104  1.00 73.69
ATOM   15948  CE   MET   2401      40.917  34.510  41.409  1.00 73.19
ATOM   15949  C    MET   2401      38.557  31.175  43.385  1.00 69.44
ATOM   15950  O    MET   2401      37.456  31.030  43.915  1.00 69.61
ATOM   15951  N    MET   2401      40.519  29.702  43.899  1.00 70.53
ATOM   15952  CA   MET   2401      39.842  30.999  44.194  1.00 70.42
ATOM   15953  N    LYS   2402      38.701  31.491  42.101  1.00 67.98
ATOM   15954  CA   LYS   2402      37.549  31.687  41.227  1.00 65.67
ATOM   15955  CB   LYS   2402      37.289  33.184  41.023  1.00 66.61
ATOM   15956  CG   LYS   2402      36.953  33.945  42.298  1.00 67.98
ATOM   15957  CD   LYS   2402      35.541  33.652  42.783  1.00 68.89
ATOM   15958  CE   LYS   2402      34.501  34.222  41.830  1.00 69.72
ATOM   15959  NZ   LYS   2402      33.116  34.024  42.339  1.00 70.87
ATOM   15960  C    LYS   2402      37.781  31.021  39.875  1.00 62.73
ATOM   15961  O    LYS   2402      38.258  31.656  38.935  1.00 63.72
ATOM   15962  N    PRO   2403      37.454  29.725  39.763  1.00 59.41
ATOM   15963  CD   PRO   2403      37.320  29.060  38.454  1.00 58.79
ATOM   15964  CA   PRO   2403      36.895  28.884  40.825  1.00 55.82
ATOM   15965  CB   PRO   2403      35.981  27.948  40.054  1.00 57.33
ATOM   15966  CG   PRO   2403      36.797  27.681  38.829  1.00 58.38
ATOM   15967  C    PRO   2403      37.987  28.122  41.576  1.00 52.24
```

```
ATOM  15968  O    PRO  2403      39.149  28.127  41.170  1.00 51.69
ATOM  15969  N    THR  2404      37.605  27.465  42.667  1.00 47.66
ATOM  15970  CA   THR  2404      38.550  26.690  43.463  1.00 43.63
ATOM  15971  CB   THR  2404      37.971  26.341  44.846  1.00 43.73
ATOM  15972  OG1  THR  2404      37.739  27.544  45.588  1.00 43.30
ATOM  15973  CG2  THR  2404      38.935  25.452  45.617  1.00 42.68
ATOM  15974  C    THR  2404      38.887  25.393  42.740  1.00 41.58
ATOM  15975  O    THR  2404      38.007  24.741  42.178  1.00 38.87
ATOM  15976  N    THR  2405      40.163  25.022  42.762  1.00 40.92
ATOM  15977  CA   THR  2405      40.617  23.807  42.101  1.00 40.37
ATOM  15978  CB   THR  2405      41.289  24.127  40.753  1.00 40.36
ATOM  15979  OG1  THR  2405      42.436  24.956  40.974  1.00 40.01
ATOM  15980  CG2  THR  2405      40.317  24.849  39.832  1.00 39.63
ATOM  15981  C    THR  2405      41.607  23.020  42.954  1.00 40.56
ATOM  15982  O    THR  2405      42.106  23.514  43.966  1.00 39.81
ATOM  15983  N    ILE  2406      41.883  21.790  42.531  1.00 40.97
ATOM  15984  CA   ILE  2406      42.815  20.909  43.228  1.00 41.27
ATOM  15985  CB   ILE  2406      43.064  19.621  42.414  1.00 41.43
ATOM  15986  CG2  ILE  2406      43.817  18.602  43.264  1.00 39.98
ATOM  15987  CG1  ILE  2406      41.730  19.036  41.949  1.00 42.65
ATOM  15988  CD1  ILE  2406      41.859  18.074  40.783  1.00 44.77
ATOM  15989  C    ILE  2406      44.154  21.614  43.423  1.00 41.31
ATOM  15990  O    ILE  2406      44.771  21.514  44.482  1.00 41.10
ATOM  15991  N    SER  2407      44.595  22.327  42.392  1.00 41.82
ATOM  15992  CA   SER  2407      45.864  23.043  42.442  1.00 42.16
ATOM  15993  CB   SER  2407      46.042  23.881  41.175  1.00 42.77
ATOM  15994  OG   SER  2407      46.077  23.056  40.026  1.00 45.09
ATOM  15995  C    SER  2407      45.974  23.942  43.669  1.00 41.86
ATOM  15996  O    SER  2407      47.060  24.130  44.217  1.00 42.04
ATOM  15997  N    LEU  2408      44.846  24.495  44.101  1.00 41.20
ATOM  15998  CA   LEU  2408      44.838  25.374  45.262  1.00 40.42
ATOM  15999  CB   LEU  2408      43.483  26.071  45.390  1.00 41.71
ATOM  16000  CG   LEU  2408      43.521  27.558  45.753  1.00 42.81
ATOM  16001  CD1  LEU  2408      42.115  28.034  46.090  1.00 42.95
ATOM  16002  CD2  LEU  2408      44.449  27.786  46.927  1.00 43.29
ATOM  16003  C    LEU  2408      45.126  24.580  46.533  1.00 39.32
ATOM  16004  O    LEU  2408      45.921  25.004  47.372  1.00 38.69
ATOM  16005  N    LEU  2409      44.475  23.428  46.668  1.00 38.01
ATOM  16006  CA   LEU  2409      44.658  22.571  47.836  1.00 37.10
ATOM  16007  CB   LEU  2409      43.746  21.348  47.748  1.00 36.29
ATOM  16008  CG   LEU  2409      42.235  21.599  47.772  1.00 37.24
ATOM  16009  CD1  LEU  2409      41.507  20.264  47.730  1.00 36.39
ATOM  16010  CD2  LEU  2409      41.859  22.369  49.024  1.00 36.03
ATOM  16011  C    LEU  2409      46.103  22.113  47.956  1.00 37.48
ATOM  16012  O    LEU  2409      46.654  22.037  49.055  1.00 37.24
ATOM  16013  N    GLN  2410      46.711  21.805  46.815  1.00 37.94
ATOM  16014  CA   GLN  2410      48.096  21.356  46.779  1.00 38.43
ATOM  16015  CB   GLN  2410      48.487  20.989  45.346  1.00 38.65
ATOM  16016  CG   GLN  2410      49.854  20.334  45.206  1.00 39.36
ATOM  16017  CD   GLN  2410      49.974  19.041  45.993  1.00 40.42
ATOM  16018  OE1  GLN  2410      50.233  19.054  47.198  1.00 40.18
ATOM  16019  NE2  GLN  2410      49.772  17.912  45.314  1.00 39.42
ATOM  16020  C    GLN  2410      48.986  22.477  47.299  1.00 38.19
ATOM  16021  O    GLN  2410      49.927  22.239  48.057  1.00 38.73
ATOM  16022  N    LYS  2411      48.676  23.701  46.888  1.00 38.25
ATOM  16023  CA   LYS  2411      49.431  24.866  47.324  1.00 38.59
ATOM  16024  CB   LYS  2411      48.887  26.129  46.652  1.00 40.48
ATOM  16025  CG   LYS  2411      49.561  27.410  47.114  1.00 44.48
ATOM  16026  CD   LYS  2411      48.792  28.639  46.664  1.00 46.76
ATOM  16027  CE   LYS  2411      49.479  29.911  47.132  1.00 48.94
ATOM  16028  NZ   LYS  2411      48.656  31.123  46.857  1.00 51.10
ATOM  16029  C    LYS  2411      49.313  25.009  48.839  1.00 37.82
ATOM  16030  O    LYS  2411      50.300  25.261  49.533  1.00 36.98
ATOM  16031  N    TYR  2412      48.094  24.846  49.346  1.00 36.70
ATOM  16032  CA   TYR  2412      47.839  24.959  50.776  1.00 36.04
ATOM  16033  CB   TYR  2412      46.364  24.667  51.075  1.00 38.21
ATOM  16034  CG   TYR  2412      45.409  25.792  50.731  1.00 39.60
ATOM  16035  CD1  TYR  2412      44.029  25.579  50.728  1.00 41.45
ATOM  16036  CE1  TYR  2412      43.137  26.615  50.450  1.00 42.37
ATOM  16037  CD2  TYR  2412      45.877  27.075  50.444  1.00 40.64
ATOM  16038  CE2  TYR  2412      44.995  28.117  50.166  1.00 41.94
ATOM  16039  CZ   TYR  2412      43.626  27.879  50.172  1.00 42.98
ATOM  16040  OH   TYR  2412      42.746  28.905  49.908  1.00 45.55
ATOM  16041  C    TYR  2412      48.726  24.020  51.587  1.00 33.83
ATOM  16042  O    TYR  2412      49.264  24.408  52.621  1.00 32.94
ATOM  16043  N    LYS  2413      48.884  22.787  51.118  1.00 32.53
ATOM  16044  CA   LYS  2413      49.711  21.825  51.832  1.00 34.20
```

```
ATOM   16045  CB   LYS   2413      49.613  20.437  51.197  1.00 32.95
ATOM   16046  CG   LYS   2413      50.515  19.412  51.871  1.00 31.62
ATOM   16047  CD   LYS   2413      50.181  17.995  51.455  1.00 30.68
ATOM   16048  CE   LYS   2413      51.017  16.996  52.235  1.00 29.20
ATOM   16049  NZ   LYS   2413      50.512  15.606  52.122  1.00 28.10
ATOM   16050  C    LYS   2413      51.168  22.266  51.848  1.00 34.97
ATOM   16051  O    LYS   2413      51.864  22.101  52.848  1.00 33.55
ATOM   16052  N    GLN   2414      51.629  22.815  50.730  1.00 37.13
ATOM   16053  CA   GLN   2414      53.002  23.282  50.631  1.00 40.24
ATOM   16054  CB   GLN   2414      53.301  23.745  49.207  1.00 43.05
ATOM   16055  CG   GLN   2414      53.429  22.605  48.210  1.00 47.04
ATOM   16056  CD   GLN   2414      53.593  23.099  46.784  1.00 49.63
ATOM   16057  OE1  GLN   2414      54.346  24.043  46.523  1.00 51.23
ATOM   16058  NE2  GLN   2414      52.897  22.457  45.850  1.00 49.77
ATOM   16059  C    GLN   2414      53.228  24.425  51.609  1.00 41.12
ATOM   16060  O    GLN   2414      54.266  24.494  52.267  1.00 41.34
ATOM   16061  N    GLU   2415      52.247  25.315  51.704  1.00 41.66
ATOM   16062  CA   GLU   2415      52.325  26.454  52.609  1.00 42.25
ATOM   16063  CB   GLU   2415      51.333  27.536  52.180  1.00 43.79
ATOM   16064  CG   GLU   2415      51.495  27.981  50.740  1.00 46.53
ATOM   16065  CD   GLU   2415      50.637  29.182  50.404  1.00 47.48
ATOM   16066  OE1  GLU   2415      49.401  29.100  50.564  1.00 48.81
ATOM   16067  OE2  GLU   2415      51.202  30.212  49.979  1.00 49.09
ATOM   16068  C    GLU   2415      52.011  26.010  54.034  1.00 41.63
ATOM   16069  O    GLU   2415      52.000  26.820  54.964  1.00 41.75
ATOM   16070  N    LYS   2416      51.753  24.716  54.194  1.00 40.45
ATOM   16071  CA   LYS   2416      51.435  24.143  55.496  1.00 40.01
ATOM   16072  CB   LYS   2416      52.607  24.345  56.458  1.00 42.70
ATOM   16073  CG   LYS   2416      53.969  24.092  55.830  1.00 45.22
ATOM   16074  CD   LYS   2416      54.093  22.669  55.316  1.00 47.92
ATOM   16075  CE   LYS   2416      55.361  22.490  54.492  1.00 49.09
ATOM   16076  NZ   LYS   2416      56.586  22.872  55.248  1.00 50.44
ATOM   16077  C    LYS   2416      50.177  24.784  56.077  1.00 38.54
ATOM   16078  O    LYS   2416      50.012  24.850  57.295  1.00 38.60
ATOM   16079  N    LYS   2417      49.296  25.266  55.205  1.00 36.93
ATOM   16080  CA   LYS   2417      48.053  25.891  55.644  1.00 34.59
ATOM   16081  CB   LYS   2417      47.682  27.061  54.727  1.00 35.93
ATOM   16082  CG   LYS   2417      46.420  27.802  55.159  1.00 36.62
ATOM   16083  CD   LYS   2417      45.948  28.803  54.106  1.00 40.30
ATOM   16084  CE   LYS   2417      46.952  29.928  53.890  1.00 41.87
ATOM   16085  NZ   LYS   2417      46.553  30.824  52.762  1.00 42.71
ATOM   16086  C    LYS   2417      46.917  24.873  55.641  1.00 33.02
ATOM   16087  O    LYS   2417      46.510  24.388  54.584  1.00 31.46
ATOM   16088  N    ARG   2418      46.414  24.552  56.829  1.00 31.31
ATOM   16089  CA   ARG   2418      45.320  23.595  56.968  1.00 29.79
ATOM   16090  CB   ARG   2418      45.198  23.161  58.429  1.00 30.22
ATOM   16091  CG   ARG   2418      46.304  22.203  58.847  1.00 31.76
ATOM   16092  CD   ARG   2418      46.446  22.096  60.355  1.00 33.22
ATOM   16093  NE   ARG   2418      46.949  23.344  60.925  1.00 34.67
ATOM   16094  CZ   ARG   2418      47.516  23.446  62.122  1.00 34.59
ATOM   16095  NH1  ARG   2418      47.659  22.371  62.884  1.00 35.64
ATOM   16096  NH2  ARG   2418      47.938  24.623  62.556  1.00 33.41
ATOM   16097  C    ARG   2418      44.011  24.195  56.466  1.00 28.42
ATOM   16098  O    ARG   2418      43.638  25.300  56.854  1.00 28.67
ATOM   16099  N    PHE   2419      43.318  23.454  55.603  1.00 27.53
ATOM   16100  CA   PHE   2419      42.065  23.915  55.005  1.00 24.08
ATOM   16101  CB   PHE   2419      42.198  23.883  53.478  1.00 25.14
ATOM   16102  CG   PHE   2419      42.502  22.519  52.917  1.00 27.81
ATOM   16103  CD1  PHE   2419      41.472  21.650  52.560  1.00 27.73
ATOM   16104  CD2  PHE   2419      43.821  22.100  52.742  1.00 27.96
ATOM   16105  CE1  PHE   2419      41.748  20.387  52.036  1.00 26.05
ATOM   16106  CE2  PHE   2419      44.109  20.836  52.218  1.00 28.62
ATOM   16107  CZ   PHE   2419      43.070  19.978  51.864  1.00 27.50
ATOM   16108  C    PHE   2419      40.837  23.110  55.439  1.00 22.88
ATOM   16109  O    PHE   2419      40.930  21.924  55.734  1.00 19.16
ATOM   16110  N    ALA   2420      39.684  23.768  55.476  1.00 21.94
ATOM   16111  CA   ALA   2420      38.456  23.100  55.872  1.00 22.77
ATOM   16112  CB   ALA   2420      37.617  24.027  56.757  1.00 21.44
ATOM   16113  C    ALA   2420      37.640  22.656  54.660  1.00 22.17
ATOM   16114  O    ALA   2420      37.611  23.332  53.626  1.00 22.74
ATOM   16115  N    THR   2421      36.977  21.512  54.802  1.00 22.82
ATOM   16116  CA   THR   2421      36.138  20.942  53.750  1.00 22.02
ATOM   16117  CB   THR   2421      36.814  19.711  53.110  1.00 24.06
ATOM   16118  OG1  THR   2421      38.061  20.108  52.514  1.00 26.62
ATOM   16119  CG2  THR   2421      35.923  19.109  52.048  1.00 27.64
ATOM   16120  C    THR   2421      34.839  20.509  54.419  1.00 18.96
ATOM   16121  O    THR   2421      34.814  20.246  55.619  1.00 18.47
```

```
ATOM  16122  N    ILE  2422      33.759  20.422  53.656  1.00 19.02
ATOM  16123  CA   ILE  2422      32.487  20.040  54.257  1.00 17.25
ATOM  16124  CB   ILE  2422      31.764  21.296  54.811  1.00 19.41
ATOM  16125  CG2  ILE  2422      31.183  22.112  53.667  1.00 20.48
ATOM  16126  CG1  ILE  2422      30.664  20.889  55.792  1.00 21.17
ATOM  16127  CD1  ILE  2422      30.129  22.046  56.604  1.00 25.73
ATOM  16128  C    ILE  2422      31.574  19.332  53.269  1.00 17.99
ATOM  16129  O    ILE  2422      31.726  19.474  52.059  1.00 16.35
ATOM  16130  N    THR  2423      30.625  18.569  53.793  1.00 17.55
ATOM  16131  CA   THR  2423      29.686  17.873  52.932  1.00 20.49
ATOM  16132  CB   THR  2423      29.163  16.577  53.580  1.00 21.53
ATOM  16133  OG1  THR  2423      28.287  16.899  54.668  1.00 22.21
ATOM  16134  CG2  THR  2423      30.327  15.738  54.098  1.00 26.19
ATOM  16135  C    THR  2423      28.514  18.815  52.682  1.00 19.08
ATOM  16136  O    THR  2423      28.210  19.678  53.504  1.00 18.44
ATOM  16137  N    ALA  2424      27.877  18.661  51.527  1.00 18.78
ATOM  16138  CA   ALA  2424      26.730  19.476  51.154  1.00 16.80
ATOM  16139  CB   ALA  2424      27.180  20.720  50.394  1.00 17.89
ATOM  16140  C    ALA  2424      25.843  18.614  50.269  1.00 17.29
ATOM  16141  O    ALA  2424      26.342  17.787  49.510  1.00 15.04
ATOM  16142  N    TYR  2425      24.532  18.795  50.361  1.00 16.73
ATOM  16143  CA   TYR  2425      23.633  17.982  49.547  1.00 17.37
ATOM  16144  CB   TYR  2425      23.040  16.852  50.387  1.00 16.33
ATOM  16145  CG   TYR  2425      24.006  16.220  51.351  1.00 17.54
ATOM  16146  CD1  TYR  2425      23.974  16.546  52.704  1.00 18.85
ATOM  16147  CE1  TYR  2425      24.846  15.954  53.605  1.00 19.50
ATOM  16148  CD2  TYR  2425      24.946  15.285  50.917  1.00 17.67
ATOM  16149  CE2  TYR  2425      25.829  14.684  51.815  1.00 18.16
ATOM  16150  CZ   TYR  2425      25.766  15.026  53.160  1.00 19.76
ATOM  16151  OH   TYR  2425      26.608  14.418  54.065  1.00 21.42
ATOM  16152  C    TYR  2425      22.496  18.760  48.908  1.00 18.27
ATOM  16153  O    TYR  2425      21.639  18.172  48.248  1.00 20.53
ATOM  16154  N    ASP  2426      22.477  20.074  49.101  1.00 17.43
ATOM  16155  CA   ASP  2426      21.420  20.899  48.525  1.00 17.57
ATOM  16156  CB   ASP  2426      20.228  20.964  49.486  1.00 17.38
ATOM  16157  CG   ASP  2426      20.581  21.617  50.824  1.00 18.75
ATOM  16158  OD1  ASP  2426      20.752  22.849  50.861  1.00 20.93
ATOM  16159  OD2  ASP  2426      20.687  20.892  51.836  1.00 19.12
ATOM  16160  C    ASP  2426      21.904  22.309  48.195  1.00 19.13
ATOM  16161  O    ASP  2426      22.985  22.720  48.615  1.00 19.45
ATOM  16162  N    TYR  2427      21.084  23.040  47.448  1.00 17.80
ATOM  16163  CA   TYR  2427      21.385  24.404  47.026  1.00 20.14
ATOM  16164  CB   TYR  2427      20.232  24.941  46.175  1.00 19.94
ATOM  16165  CG   TYR  2427      20.321  26.420  45.862  1.00 20.70
ATOM  16166  CD1  TYR  2427      21.142  26.891  44.838  1.00 20.50
ATOM  16167  CE1  TYR  2427      21.222  28.253  44.547  1.00 23.68
ATOM  16168  CD2  TYR  2427      19.581  27.351  46.594  1.00 23.01
ATOM  16169  CE2  TYR  2427      19.652  28.711  46.314  1.00 23.40
ATOM  16170  CZ   TYR  2427      20.470  29.156  45.291  1.00 24.74
ATOM  16171  OH   TYR  2427      20.526  30.499  45.006  1.00 28.18
ATOM  16172  C    TYR  2427      21.630  25.382  48.174  1.00 20.13
ATOM  16173  O    TYR  2427      22.609  26.124  48.163  1.00 19.70
ATOM  16174  N    SER  2428      20.727  25.379  49.148  1.00 20.69
ATOM  16175  CA   SER  2428      20.794  26.288  50.287  1.00 20.45
ATOM  16176  CB   SER  2428      19.592  26.055  51.200  1.00 21.08
ATOM  16177  OG   SER  2428      18.394  26.357  50.511  1.00 19.23
ATOM  16178  C    SER  2428      22.077  26.252  51.107  1.00 20.33
ATOM  16179  O    SER  2428      22.717  27.289  51.328  1.00 19.96
ATOM  16180  N    PHE  2429      22.456  25.073  51.580  1.00 18.92
ATOM  16181  CA   PHE  2429      23.678  24.976  52.363  1.00 18.46
ATOM  16182  CB   PHE  2429      23.739  23.643  53.120  1.00 17.47
ATOM  16183  CG   PHE  2429      22.916  23.633  54.381  1.00 18.24
ATOM  16184  CD1  PHE  2429      21.682  22.986  54.427  1.00 17.48
ATOM  16185  CD2  PHE  2429      23.370  24.296  55.524  1.00 15.99
ATOM  16186  CE1  PHE  2429      20.911  22.995  55.590  1.00 17.58
ATOM  16187  CE2  PHE  2429      22.611  24.312  56.686  1.00 13.97
ATOM  16188  CZ   PHE  2429      21.376  23.661  56.727  1.00 17.59
ATOM  16189  C    PHE  2429      24.917  25.174  51.496  1.00 19.44
ATOM  16190  O    PHE  2429      25.885  25.813  51.924  1.00 18.28
ATOM  16191  N    ALA  2430      24.892  24.653  50.271  1.00 20.34
ATOM  16192  CA   ALA  2430      26.035  24.831  49.381  1.00 22.75
ATOM  16193  CB   ALA  2430      25.805  24.092  48.064  1.00 22.82
ATOM  16194  C    ALA  2430      26.251  26.325  49.119  1.00 23.92
ATOM  16195  O    ALA  2430      27.388  26.792  49.003  1.00 25.09
ATOM  16196  N    LYS  2431      25.148  27.065  49.037  1.00 24.33
ATOM  16197  CA   LYS  2431      25.180  28.506  48.797  1.00 25.15
ATOM  16198  CB   LYS  2431      23.767  28.999  48.460  1.00 27.16
```

```
ATOM   16199  CG  LYS  2431      23.646  30.478  48.124  1.00 29.73
ATOM   16200  CD  LYS  2431      24.318  30.816  46.811  1.00 34.33
ATOM   16201  CE  LYS  2431      23.775  32.117  46.241  1.00 37.47
ATOM   16202  NZ  LYS  2431      23.956  33.264  47.174  1.00 39.95
ATOM   16203  C   LYS  2431      25.712  29.246  50.027  1.00 24.27
ATOM   16204  O   LYS  2431      26.546  30.145  49.918  1.00 23.43
ATOM   16205  N   LEU  2432      25.219  28.858  51.198  1.00 23.70
ATOM   16206  CA  LEU  2432      25.641  29.468  52.451  1.00 23.86
ATOM   16207  CB  LEU  2432      24.812  28.898  53.609  1.00 21.16
ATOM   16208  CG  LEU  2432      25.055  29.415  55.035  1.00 19.80
ATOM   16209  CD1 LEU  2432      23.849  29.079  55.909  1.00 16.46
ATOM   16210  CD2 LEU  2432      26.322  28.796  55.613  1.00 16.28
ATOM   16211  C   LEU  2432      27.132  29.240  52.697  1.00 24.74
ATOM   16212  O   LEU  2432      27.825  30.134  53.180  1.00 25.72
ATOM   16213  N   PHE  2433      27.630  28.051  52.367  1.00 25.69
ATOM   16214  CA  PHE  2433      29.049  27.752  52.567  1.00 25.88
ATOM   16215  CB  PHE  2433      29.343  26.259  52.358  1.00 25.66
ATOM   16216  CG  PHE  2433      28.615  25.342  53.307  1.00 23.12
ATOM   16217  CD1 PHE  2433      28.351  25.728  54.621  1.00 20.93
ATOM   16218  CD2 PHE  2433      28.204  24.076  52.884  1.00 22.54
ATOM   16219  CE1 PHE  2433      27.688  24.873  55.499  1.00 21.36
ATOM   16220  CE2 PHE  2433      27.542  23.214  53.756  1.00 21.24
ATOM   16221  CZ  PHE  2433      27.281  23.613  55.068  1.00 23.36
ATOM   16222  C   PHE  2433      29.918  28.557  51.606  1.00 28.10
ATOM   16223  O   PHE  2433      30.890  29.192  52.019  1.00 26.80
ATOM   16224  N   ALA  2434      29.575  28.520  50.319  1.00 28.19
ATOM   16225  CA  ALA  2434      30.341  29.250  49.314  1.00 29.37
ATOM   16226  CB  ALA  2434      29.714  29.072  47.934  1.00 28.66
ATOM   16227  C   ALA  2434      30.424  30.731  49.665  1.00 29.43
ATOM   16228  O   ALA  2434      31.465  31.358  49.480  1.00 29.86
ATOM   16229  N   ASP  2435      29.331  31.289  50.176  1.00 29.97
ATOM   16230  CA  ASP  2435      29.320  32.702  50.540  1.00 32.22
ATOM   16231  CB  ASP  2435      27.893  33.205  50.766  1.00 33.58
ATOM   16232  CG  ASP  2435      27.021  33.062  49.539  1.00 36.19
ATOM   16233  OD1 ASP  2435      27.540  33.202  48.409  1.00 37.94
ATOM   16234  OD2 ASP  2435      25.807  32.825  49.706  1.00 38.98
ATOM   16235  C   ASP  2435      30.143  32.997  51.787  1.00 32.06
ATOM   16236  O   ASP  2435      30.372  34.161  52.117  1.00 32.90
ATOM   16237  N   GLU  2436      30.580  31.955  52.486  1.00 31.24
ATOM   16238  CA  GLU  2436      31.376  32.149  53.687  1.00 31.97
ATOM   16239  CB  GLU  2436      30.816  31.326  54.850  1.00 32.11
ATOM   16240  CG  GLU  2436      29.464  31.801  55.357  1.00 33.39
ATOM   16241  CD  GLU  2436      29.453  33.285  55.680  1.00 33.83
ATOM   16242  OE1 GLU  2436      30.357  33.745  56.411  1.00 35.70
ATOM   16243  OE2 GLU  2436      28.537  33.987  55.208  1.00 33.76
ATOM   16244  C   GLU  2436      32.836  31.790  53.472  1.00 32.46
ATOM   16245  O   GLU  2436      33.659  31.983  54.362  1.00 32.04
ATOM   16246  N   GLY  2437      33.162  31.265  52.294  1.00 32.25
ATOM   16247  CA  GLY  2437      34.542  30.904  52.026  1.00 33.78
ATOM   16248  C   GLY  2437      34.786  29.425  51.797  1.00 33.68
ATOM   16249  O   GLY  2437      35.759  29.062  51.143  1.00 36.34
ATOM   16250  N   LEU  2438      33.927  28.569  52.347  1.00 32.66
ATOM   16251  CA  LEU  2438      34.066  27.127  52.161  1.00 32.08
ATOM   16252  CB  LEU  2438      33.059  26.372  53.031  1.00 32.00
ATOM   16253  CG  LEU  2438      33.606  25.758  54.314  1.00 31.91
ATOM   16254  CD1 LEU  2438      32.472  25.144  55.116  1.00 31.31
ATOM   16255  CD2 LEU  2438      34.656  24.708  53.977  1.00 32.09
ATOM   16256  C   LEU  2438      33.810  26.810  50.697  1.00 30.44
ATOM   16257  O   LEU  2438      32.659  26.721  50.267  1.00 30.98
ATOM   16258  N   ASN  2439      34.889  26.641  49.940  1.00 29.40
ATOM   16259  CA  ASN  2439      34.788  26.370  48.513  1.00 28.49
ATOM   16260  CB  ASN  2439      35.721  27.306  47.738  1.00 31.32
ATOM   16261  CG  ASN  2439      35.549  28.764  48.134  1.00 34.03
ATOM   16262  OD1 ASN  2439      34.435  29.292  48.140  1.00 36.11
ATOM   16263  ND2 ASN  2439      36.655  29.422  48.461  1.00 35.10
ATOM   16264  C   ASN  2439      35.122  24.922  48.173  1.00 26.24
ATOM   16265  O   ASN  2439      35.344  24.593  47.012  1.00 25.25
ATOM   16266  N   VAL  2440      35.155  24.065  49.188  1.00 24.29
ATOM   16267  CA  VAL  2440      35.446  22.657  48.985  1.00 24.09
ATOM   16268  CB  VAL  2440      36.774  22.248  49.640  1.00 25.05
ATOM   16269  CG1 VAL  2440      37.067  20.788  49.345  1.00 24.91
ATOM   16270  CG2 VAL  2440      37.896  23.126  49.114  1.00 25.37
ATOM   16271  C   VAL  2440      34.323  21.843  49.597  1.00 22.62
ATOM   16272  O   VAL  2440      34.228  21.711  50.816  1.00 19.04
ATOM   16273  N   MET  2441      33.471  21.297  48.737  1.00 21.81
ATOM   16274  CA  MET  2441      32.322  20.528  49.183  1.00 20.07
ATOM   16275  CB  MET  2441      31.033  21.250  48.785  1.00 22.11
```

```
ATOM  16276  CG   MET  2441      30.682  22.414  49.695  1.00 23.98
ATOM  16277  SD   MET  2441      29.512  23.563  48.974  1.00 25.48
ATOM  16278  CE   MET  2441      30.566  25.021  48.739  1.00 24.85
ATOM  16279  C    MET  2441      32.295  19.118  48.637  1.00 20.47
ATOM  16280  O    MET  2441      32.712  18.867  47.508  1.00 19.61
ATOM  16281  N    LEU  2442      31.786  18.200  49.450  1.00 19.57
ATOM  16282  CA   LEU  2442      31.689  16.805  49.055  1.00 20.14
ATOM  16283  CB   LEU  2442      32.576  15.951  49.964  1.00 20.82
ATOM  16284  CG   LEU  2442      32.654  14.421  49.855  1.00 24.63
ATOM  16285  CD1  LEU  2442      31.547  13.810  50.661  1.00 25.41
ATOM  16286  CD2  LEU  2442      32.611  13.956  48.399  1.00 22.10
ATOM  16287  C    LEU  2442      30.254  16.307  49.104  1.00 18.06
ATOM  16288  O    LEU  2442      29.556  16.453  50.109  1.00 15.33
ATOM  16289  N    VAL  2443      29.816  15.730  47.998  1.00 16.74
ATOM  16290  CA   VAL  2443      28.481  15.155  47.931  1.00 18.13
ATOM  16291  CB   VAL  2443      27.850  15.367  46.553  1.00 18.92
ATOM  16292  CG1  VAL  2443      26.449  14.756  46.527  1.00 18.84
ATOM  16293  CG2  VAL  2443      27.797  16.855  46.235  1.00 20.62
ATOM  16294  C    VAL  2443      28.743  13.675  48.162  1.00 18.17
ATOM  16295  O    VAL  2443      28.939  12.918  47.214  1.00 18.72
ATOM  16296  N    GLY  2444      28.759  13.278  49.432  1.00 17.59
ATOM  16297  CA   GLY  2444      29.047  11.901  49.773  1.00 17.73
ATOM  16298  C    GLY  2444      27.848  11.015  50.003  1.00 19.75
ATOM  16299  O    GLY  2444      26.722  11.499  50.162  1.00 18.97
ATOM  16300  N    ASP  2445      28.083   9.706  50.019  1.00 19.18
ATOM  16301  CA   ASP  2445      26.982   8.794  50.239  1.00 18.23
ATOM  16302  CB   ASP  2445      27.330   7.359  49.806  1.00 20.29
ATOM  16303  CG   ASP  2445      28.573   6.810  50.478  1.00 22.01
ATOM  16304  OD1  ASP  2445      29.074   7.424  51.443  1.00 22.09
ATOM  16305  OD2  ASP  2445      29.039   5.741  50.030  1.00 23.26
ATOM  16306  C    ASP  2445      26.531   8.835  51.693  1.00 17.90
ATOM  16307  O    ASP  2445      25.646   8.079  52.095  1.00 12.82
ATOM  16308  N    SER  2446      27.136   9.717  52.493  1.00 16.02
ATOM  16309  CA   SER  2446      26.710   9.842  53.884  1.00 14.42
ATOM  16310  CB   SER  2446      27.556  10.877  54.632  1.00 17.31
ATOM  16311  OG   SER  2446      27.690  12.075  53.886  1.00 19.20
ATOM  16312  C    SER  2446      25.260  10.294  53.838  1.00 13.92
ATOM  16313  O    SER  2446      24.510  10.114  54.799  1.00 15.62
ATOM  16314  N    LEU  2447      24.879  10.885  52.706  1.00 13.83
ATOM  16315  CA   LEU  2447      23.511  11.366  52.490  1.00 15.03
ATOM  16316  CB   LEU  2447      23.383  12.005  51.095  1.00 13.29
ATOM  16317  CG   LEU  2447      23.435  11.139  49.828  1.00 14.14
ATOM  16318  CD1  LEU  2447      22.038  10.529  49.557  1.00 14.78
ATOM  16319  CD2  LEU  2447      23.856  11.983  48.647  1.00 14.51
ATOM  16320  C    LEU  2447      22.505  10.232  52.636  1.00 16.55
ATOM  16321  O    LEU  2447      21.325  10.464  52.923  1.00 16.84
ATOM  16322  N    GLY  2448      22.974   9.003  52.433  1.00 14.34
ATOM  16323  CA   GLY  2448      22.092   7.856  52.549  1.00 16.03
ATOM  16324  C    GLY  2448      21.544   7.753  53.952  1.00 16.17
ATOM  16325  O    GLY  2448      20.468   7.212  54.170  1.00 14.30
ATOM  16326  N    MET  2449      22.290   8.287  54.910  1.00 16.60
ATOM  16327  CA   MET  2449      21.872   8.245  56.292  1.00 16.34
ATOM  16328  CB   MET  2449      23.056   7.814  57.157  1.00 19.82
ATOM  16329  CG   MET  2449      23.644   6.484  56.710  1.00 21.64
ATOM  16330  SD   MET  2449      24.990   5.908  57.750  1.00 24.22
ATOM  16331  CE   MET  2449      24.077   5.356  59.175  1.00 25.30
ATOM  16332  C    MET  2449      21.337   9.602  56.739  1.00 17.00
ATOM  16333  O    MET  2449      20.194   9.710  57.177  1.00 17.40
ATOM  16334  N    THR  2450      22.158  10.636  56.599  1.00 16.35
ATOM  16335  CA   THR  2450      21.774  11.980  57.007  1.00 18.67
ATOM  16336  CB   THR  2450      22.988  12.932  56.910  1.00 20.10
ATOM  16337  OG1  THR  2450      22.658  14.201  57.489  1.00 27.83
ATOM  16338  CG2  THR  2450      23.394  13.137  55.468  1.00 22.03
ATOM  16339  C    THR  2450      20.588  12.575  56.235  1.00 18.18
ATOM  16340  O    THR  2450      19.764  13.287  56.808  1.00 16.73
ATOM  16341  N    VAL  2451      20.487  12.277  54.943  1.00 16.56
ATOM  16342  CA   VAL  2451      19.388  12.809  54.138  1.00 15.70
ATOM  16343  CB   VAL  2451      19.904  13.319  52.771  1.00 16.21
ATOM  16344  CG1  VAL  2451      18.737  13.687  51.857  1.00 18.82
ATOM  16345  CG2  VAL  2451      20.794  14.531  52.983  1.00 18.81
ATOM  16346  C    VAL  2451      18.245  11.820  53.906  1.00 15.14
ATOM  16347  O    VAL  2451      17.073  12.131  54.168  1.00 13.37
ATOM  16348  N    GLN  2452      18.580  10.631  53.415  1.00 14.84
ATOM  16349  CA   GLN  2452      17.573   9.605  53.135  1.00 15.81
ATOM  16350  CB   GLN  2452      18.130   8.588  52.137  1.00 11.46
ATOM  16351  CG   GLN  2452      18.666   9.217  50.868  1.00 14.21
ATOM  16352  CD   GLN  2452      19.187   8.181  49.893  1.00 10.70
```

ATOM	16353	OE1	GLN	2452	19.456	7.044	50.279	1.00	14.39
ATOM	16354	NE2	GLN	2452	19.335	8.568	48.627	1.00	12.31
ATOM	16355	C	GLN	2452	17.071	8.883	54.376	1.00	15.31
ATOM	16356	O	GLN	2452	15.931	8.424	54.412	1.00	16.95
ATOM	16357	N	GLY	2453	17.919	8.760	55.392	1.00	16.51
ATOM	16358	CA	GLY	2453	17.480	8.111	56.619	1.00	17.32
ATOM	16359	C	GLY	2453	17.695	6.616	56.735	1.00	16.27
ATOM	16360	O	GLY	2453	17.069	5.961	57.567	1.00	15.67
ATOM	16361	N	HIS	2454	18.576	6.070	55.903	1.00	17.26
ATOM	16362	CA	HIS	2454	18.878	4.638	55.945	1.00	16.67
ATOM	16363	CB	HIS	2454	19.485	4.188	54.616	1.00	16.80
ATOM	16364	CG	HIS	2454	18.521	4.210	53.477	1.00	17.61
ATOM	16365	CD2	HIS	2454	18.472	4.977	52.363	1.00	17.85
ATOM	16366	ND1	HIS	2454	17.454	3.344	53.396	1.00	16.86
ATOM	16367	CE1	HIS	2454	16.790	3.573	52.278	1.00	19.45
ATOM	16368	NE2	HIS	2454	17.387	4.559	51.633	1.00	18.52
ATOM	16369	C	HIS	2454	19.873	4.349	57.062	1.00	17.34
ATOM	16370	O	HIS	2454	20.558	5.255	57.533	1.00	18.36
ATOM	16371	N	ASP	2455	19.945	3.084	57.475	1.00	18.16
ATOM	16372	CA	ASP	2455	20.858	2.646	58.531	1.00	21.37
ATOM	16373	CB	ASP	2455	20.435	1.270	59.074	1.00	25.85
ATOM	16374	CG	ASP	2455	20.380	0.193	57.991	1.00	30.92
ATOM	16375	OD1	ASP	2455	21.371	0.020	57.251	1.00	33.11
ATOM	16376	OD2	ASP	2455	19.344	-0.496	57.883	1.00	35.21
ATOM	16377	C	ASP	2455	22.315	2.561	58.061	1.00	20.40
ATOM	16378	O	ASP	2455	23.214	2.291	58.857	1.00	22.38
ATOM	16379	N	SER	2456	22.542	2.782	56.775	1.00	19.74
ATOM	16380	CA	SER	2456	23.885	2.725	56.216	1.00	19.12
ATOM	16381	CB	SER	2456	24.308	1.266	55.985	1.00	20.10
ATOM	16382	OG	SER	2456	23.643	0.697	54.870	1.00	21.89
ATOM	16383	C	SER	2456	23.918	3.497	54.905	1.00	17.48
ATOM	16384	O	SER	2456	22.893	3.985	54.440	1.00	17.06
ATOM	16385	N	THR	2457	25.101	3.616	54.312	1.00	14.78
ATOM	16386	CA	THR	2457	25.245	4.342	53.057	1.00	13.35
ATOM	16387	CB	THR	2457	26.641	4.990	52.951	1.00	14.64
ATOM	16388	OG1	THR	2457	27.623	3.973	52.751	1.00	14.31
ATOM	16389	CG2	THR	2457	26.984	5.744	54.237	1.00	15.15
ATOM	16390	C	THR	2457	25.050	3.469	51.816	1.00	12.59
ATOM	16391	O	THR	2457	24.984	3.980	50.700	1.00	14.58
ATOM	16392	N	LEU	2458	24.977	2.158	52.008	1.00	13.46
ATOM	16393	CA	LEU	2458	24.836	1.230	50.880	1.00	15.15
ATOM	16394	CB	LEU	2458	24.789	-0.210	51.399	1.00	16.30
ATOM	16395	CG	LEU	2458	26.150	-0.857	51.711	1.00	18.84
ATOM	16396	CD1	LEU	2458	26.834	-0.141	52.881	1.00	18.45
ATOM	16397	CD2	LEU	2458	25.933	-2.323	52.036	1.00	19.18
ATOM	16398	C	LEU	2458	23.682	1.454	49.894	1.00	16.48
ATOM	16399	O	LEU	2458	23.853	1.265	48.690	1.00	16.20
ATOM	16400	N	PRO	2459	22.496	1.843	50.388	1.00	17.41
ATOM	16401	CD	PRO	2459	22.096	1.948	51.801	1.00	17.56
ATOM	16402	CA	PRO	2459	21.352	2.073	49.494	1.00	16.65
ATOM	16403	CB	PRO	2459	20.189	2.296	50.468	1.00	19.49
ATOM	16404	CG	PRO	2459	20.870	2.806	51.710	1.00	23.52
ATOM	16405	C	PRO	2459	21.524	3.224	48.504	1.00	16.06
ATOM	16406	O	PRO	2459	20.800	3.311	47.511	1.00	13.44
ATOM	16407	N	VAL	2460	22.486	4.105	48.766	1.00	13.48
ATOM	16408	CA	VAL	2460	22.725	5.239	47.882	1.00	14.40
ATOM	16409	CB	VAL	2460	23.795	6.192	48.450	1.00	14.61
ATOM	16410	CG1	VAL	2460	24.065	7.299	47.458	1.00	14.36
ATOM	16411	CG2	VAL	2460	23.329	6.762	49.780	1.00	13.84
ATOM	16412	C	VAL	2460	23.201	4.789	46.511	1.00	15.33
ATOM	16413	O	VAL	2460	24.202	4.080	46.397	1.00	14.73
ATOM	16414	N	THR	2461	22.495	5.195	45.466	1.00	16.85
ATOM	16415	CA	THR	2461	22.921	4.803	44.139	1.00	19.10
ATOM	16416	CB	THR	2461	21.798	3.984	43.403	1.00	24.26
ATOM	16417	OG1	THR	2461	20.513	4.292	43.952	1.00	25.02
ATOM	16418	CG2	THR	2461	22.022	2.478	43.616	1.00	25.84
ATOM	16419	C	THR	2461	23.450	6.011	43.351	1.00	18.53
ATOM	16420	O	THR	2461	23.338	7.153	43.802	1.00	17.30
ATOM	16421	N	VAL	2462	24.074	5.758	42.207	1.00	16.22
ATOM	16422	CA	VAL	2462	24.651	6.823	41.392	1.00	16.40
ATOM	16423	CB	VAL	2462	25.214	6.253	40.072	1.00	15.77
ATOM	16424	CG1	VAL	2462	25.794	7.369	39.219	1.00	15.65
ATOM	16425	CG2	VAL	2462	26.275	5.213	40.385	1.00	18.55
ATOM	16426	C	VAL	2462	23.679	7.951	41.057	1.00	16.36
ATOM	16427	O	VAL	2462	24.061	9.127	41.020	1.00	16.32
ATOM	16428	N	ALA	2463	22.425	7.594	40.804	1.00	14.77
ATOM	16429	CA	ALA	2463	21.417	8.586	40.475	1.00	15.24

```
ATOM   16430  CB   ALA  2463      20.100    7.900   40.118   1.00  17.40
ATOM   16431  C    ALA  2463      21.211    9.540   41.647   1.00  15.53
ATOM   16432  O    ALA  2463      20.998   10.737   41.448   1.00  17.50
ATOM   16433  N    ASP  2464      21.260    9.009   42.864   1.00  15.85
ATOM   16434  CA   ASP  2464      21.096    9.837   44.051   1.00  15.44
ATOM   16435  CB   ASP  2464      21.161    8.999   45.338   1.00  15.36
ATOM   16436  CG   ASP  2464      19.964    8.076   45.514   1.00  16.71
ATOM   16437  OD1  ASP  2464      18.885    8.353   44.930   1.00  13.53
ATOM   16438  OD2  ASP  2464      20.110    7.088   46.266   1.00  15.10
ATOM   16439  C    ASP  2464      22.229   10.859   44.078   1.00  15.31
ATOM   16440  O    ASP  2464      22.000   12.058   44.249   1.00  14.61
ATOM   16441  N    ILE  2465      23.460   10.384   43.910   1.00  14.73
ATOM   16442  CA   ILE  2465      24.613   11.283   43.928   1.00  14.21
ATOM   16443  CB   ILE  2465      25.937   10.504   43.708   1.00  14.08
ATOM   16444  CG2  ILE  2465      27.104   11.484   43.609   1.00  12.92
ATOM   16445  CG1  ILE  2465      26.159    9.511   44.861   1.00  11.78
ATOM   16446  CD1  ILE  2465      26.437   10.163   46.224   1.00  16.30
ATOM   16447  C    ILE  2465      24.482   12.377   42.867   1.00  14.68
ATOM   16448  O    ILE  2465      24.675   13.556   43.159   1.00  15.78
ATOM   16449  N    ALA  2466      24.137   11.995   41.642   1.00  13.89
ATOM   16450  CA   ALA  2466      23.993   12.960   40.551   1.00  14.00
ATOM   16451  CB   ALA  2466      23.631   12.229   39.246   1.00  13.36
ATOM   16452  C    ALA  2466      22.942   14.027   40.849   1.00  14.38
ATOM   16453  O    ALA  2466      23.082   15.179   40.445   1.00  16.13
ATOM   16454  N    TYR  2467      21.871   13.620   41.518   1.00  15.16
ATOM   16455  CA   TYR  2467      20.792   14.527   41.874   1.00  14.44
ATOM   16456  CB   TYR  2467      19.660   13.744   42.536   1.00  15.27
ATOM   16457  CG   TYR  2467      18.537   14.592   43.094   1.00  16.93
ATOM   16458  CD1  TYR  2467      17.661   15.271   42.252   1.00  17.28
ATOM   16459  CE1  TYR  2467      16.603   16.016   42.765   1.00  17.30
ATOM   16460  CD2  TYR  2467      18.331   14.680   44.471   1.00  17.80
ATOM   16461  CE2  TYR  2467      17.281   15.419   45.000   1.00  17.99
ATOM   16462  CZ   TYR  2467      16.415   16.084   44.143   1.00  19.01
ATOM   16463  OH   TYR  2467      15.355   16.787   44.665   1.00  16.68
ATOM   16464  C    TYR  2467      21.293   15.606   42.833   1.00  12.99
ATOM   16465  O    TYR  2467      21.094   16.799   42.605   1.00  14.73
ATOM   16466  N    HIS  2468      21.942   15.180   43.905   1.00  13.09
ATOM   16467  CA   HIS  2468      22.450   16.117   44.897   1.00  14.34
ATOM   16468  CB   HIS  2468      22.822   15.360   46.174   1.00  13.15
ATOM   16469  CG   HIS  2468      21.632   14.846   46.924   1.00  17.11
ATOM   16470  CD2  HIS  2468      21.090   13.606   46.999   1.00  17.53
ATOM   16471  ND1  HIS  2468      20.797   15.671   47.649   1.00  15.01
ATOM   16472  CE1  HIS  2468      19.792   14.963   48.134   1.00  17.40
ATOM   16473  NE2  HIS  2468      19.945   13.707   47.753   1.00  18.53
ATOM   16474  C    HIS  2468      23.626   16.936   44.378   1.00  15.33
ATOM   16475  O    HIS  2468      23.834   18.069   44.803   1.00  14.82
ATOM   16476  N    THR  2469      24.391   16.366   43.452   1.00  15.33
ATOM   16477  CA   THR  2469      25.527   17.073   42.873   1.00  16.60
ATOM   16478  CB   THR  2469      26.348   16.132   41.968   1.00  16.20
ATOM   16479  OG1  THR  2469      27.046   15.184   42.785   1.00  17.12
ATOM   16480  CG2  THR  2469      27.352   16.919   41.134   1.00  14.14
ATOM   16481  C    THR  2469      25.066   18.298   42.078   1.00  16.62
ATOM   16482  O    THR  2469      25.631   19.387   42.215   1.00  18.28
ATOM   16483  N    ALA  2470      24.034   18.122   41.256   1.00  17.01
ATOM   16484  CA   ALA  2470      23.508   19.222   40.461   1.00  16.73
ATOM   16485  CB   ALA  2470      22.383   18.726   39.549   1.00  18.75
ATOM   16486  C    ALA  2470      22.992   20.320   41.391   1.00  17.94
ATOM   16487  O    ALA  2470      23.185   21.505   41.125   1.00  18.99
ATOM   16488  N    ALA  2471      22.342   19.921   42.479   1.00  17.24
ATOM   16489  CA   ALA  2471      21.807   20.875   43.445   1.00  19.28
ATOM   16490  CB   ALA  2471      21.024   20.137   44.529   1.00  18.10
ATOM   16491  C    ALA  2471      22.921   21.705   44.083   1.00  20.30
ATOM   16492  O    ALA  2471      22.814   22.927   44.191   1.00  22.29
ATOM   16493  N    VAL  2472      23.987   21.036   44.510   1.00  21.49
ATOM   16494  CA   VAL  2472      25.126   21.708   45.144   1.00  20.58
ATOM   16495  CB   VAL  2472      26.149   20.670   45.669   1.00  20.42
ATOM   16496  CG1  VAL  2472      27.441   21.359   46.104   1.00  18.63
ATOM   16497  CG2  VAL  2472      25.543   19.901   46.832   1.00  17.07
ATOM   16498  C    VAL  2472      25.829   22.656   44.178   1.00  21.47
ATOM   16499  O    VAL  2472      26.220   23.763   44.552   1.00  20.66
ATOM   16500  N    ARG  2473      26.000   22.215   42.938   1.00  20.73
ATOM   16501  CA   ARG  2473      26.651   23.043   41.939   1.00  20.95
ATOM   16502  CB   ARG  2473      26.805   22.273   40.622   1.00  21.67
ATOM   16503  CG   ARG  2473      27.384   23.113   39.490   1.00  23.02
ATOM   16504  CD   ARG  2473      28.729   23.711   39.889   1.00  23.89
ATOM   16505  NE   ARG  2473      29.797   22.724   39.904   1.00  23.45
ATOM   16506  CZ   ARG  2473      30.932   22.858   40.584   1.00  26.20
```

```
ATOM   16507  NH1 ARG  2473      31.148  23.941  41.320  1.00 24.63
ATOM   16508  NH2 ARG  2473      31.864  21.915  40.515  1.00 21.81
ATOM   16509  C   ARG  2473      25.857  24.326  41.699  1.00 22.12
ATOM   16510  O   ARG  2473      26.437  25.398  41.529  1.00 23.41
ATOM   16511  N   ARG  2474      24.532  24.229  41.684  1.00 20.61
ATOM   16512  CA  ARG  2474      23.728  25.424  41.459  1.00 22.05
ATOM   16513  CB  ARG  2474      22.237  25.075  41.369  1.00 23.15
ATOM   16514  CG  ARG  2474      21.883  24.197  40.178  1.00 25.72
ATOM   16515  CD  ARG  2474      20.381  24.163  39.933  1.00 26.31
ATOM   16516  NE  ARG  2474      20.023  23.166  38.930  1.00 29.12
ATOM   16517  CZ  ARG  2474      19.951  21.859  39.159  1.00 30.89
ATOM   16518  NH1 ARG  2474      20.205  21.375  40.370  1.00 31.05
ATOM   16519  NH2 ARG  2474      19.638  21.030  38.168  1.00 29.85
ATOM   16520  C   ARG  2474      23.958  26.446  42.571  1.00 21.79
ATOM   16521  O   ARG  2474      23.888  27.651  42.337  1.00 19.95
ATOM   16522  N   GLY  2475      24.249  25.959  43.772  1.00 21.36
ATOM   16523  CA  GLY  2475      24.487  26.853  44.889  1.00 23.25
ATOM   16524  C   GLY  2475      25.922  27.337  44.982  1.00 23.98
ATOM   16525  O   GLY  2475      26.186  28.396  45.552  1.00 23.43
ATOM   16526  N   ALA  2476      26.849  26.568  44.418  1.00 23.91
ATOM   16527  CA  ALA  2476      28.264  26.920  44.447  1.00 25.38
ATOM   16528  CB  ALA  2476      28.948  26.219  45.616  1.00 25.54
ATOM   16529  C   ALA  2476      28.930  26.517  43.134  1.00 26.02
ATOM   16530  O   ALA  2476      29.616  25.498  43.066  1.00 27.80
ATOM   16531  N   PRO  2477      28.741  27.319  42.074  1.00 26.85
ATOM   16532  CD  PRO  2477      27.952  28.563  42.035  1.00 28.05
ATOM   16533  CA  PRO  2477      29.322  27.038  40.757  1.00 29.05
ATOM   16534  CB  PRO  2477      28.607  28.035  39.853  1.00 28.77
ATOM   16535  CG  PRO  2477      28.429  29.204  40.748  1.00 29.67
ATOM   16536  C   PRO  2477      30.839  27.159  40.664  1.00 29.31
ATOM   16537  O   PRO  2477      31.441  26.680  39.706  1.00 30.76
ATOM   16538  N   ASN  2478      31.453  27.788  41.661  1.00 30.39
ATOM   16539  CA  ASN  2478      32.897  27.974  41.655  1.00 29.62
ATOM   16540  CB  ASN  2478      33.229  29.453  41.881  1.00 30.92
ATOM   16541  CG  ASN  2478      32.571  30.360  40.858  1.00 31.62
ATOM   16542  OD1 ASN  2478      32.859  30.284  39.665  1.00 33.22
ATOM   16543  ND2 ASN  2478      31.667  31.215  41.322  1.00 34.26
ATOM   16544  C   ASN  2478      33.616  27.128  42.695  1.00 28.50
ATOM   16545  O   ASN  2478      34.828  27.231  42.842  1.00 29.41
ATOM   16546  N   CYS  2479      32.877  26.280  43.402  1.00 27.76
ATOM   16547  CA  CYS  2479      33.487  25.444  44.428  1.00 24.78
ATOM   16548  CB  CYS  2479      32.444  25.031  45.475  1.00 25.50
ATOM   16549  SG  CYS  2479      31.459  23.551  45.037  1.00 26.02
ATOM   16550  C   CYS  2479      34.122  24.188  43.845  1.00 24.27
ATOM   16551  O   CYS  2479      33.787  23.760  42.740  1.00 23.85
ATOM   16552  N   LEU  2480      35.065  23.616  44.589  1.00 22.97
ATOM   16553  CA  LEU  2480      35.697  22.375  44.175  1.00 22.48
ATOM   16554  CB  LEU  2480      37.062  22.189  44.852  1.00 22.33
ATOM   16555  CG  LEU  2480      37.763  20.855  44.584  1.00 23.00
ATOM   16556  CD1 LEU  2480      37.990  20.684  43.095  1.00 23.31
ATOM   16557  CD2 LEU  2480      39.087  20.787  45.335  1.00 22.05
ATOM   16558  C   LEU  2480      34.693  21.342  44.680  1.00 21.39
ATOM   16559  O   LEU  2480      34.571  21.114  45.884  1.00 20.80
ATOM   16560  N   LEU  2481      33.960  20.739  43.749  1.00 20.74
ATOM   16561  CA  LEU  2481      32.926  19.772  44.089  1.00 19.90
ATOM   16562  CB  LEU  2481      31.684  20.025  43.217  1.00 21.31
ATOM   16563  CG  LEU  2481      30.295  19.607  43.726  1.00 24.25
ATOM   16564  CD1 LEU  2481      29.231  20.182  42.806  1.00 24.77
ATOM   16565  CD2 LEU  2481      30.184  18.094  43.805  1.00 25.65
ATOM   16566  C   LEU  2481      33.384  18.328  43.931  1.00 20.50
ATOM   16567  O   LEU  2481      33.681  17.875  42.824  1.00 20.28
ATOM   16568  N   LEU  2482      33.451  17.613  45.046  1.00 19.62
ATOM   16569  CA  LEU  2482      33.844  16.211  45.030  1.00 19.59
ATOM   16570  CB  LEU  2482      34.776  15.889  46.198  1.00 19.36
ATOM   16571  CG  LEU  2482      36.249  16.304  46.107  1.00 21.46
ATOM   16572  CD1 LEU  2482      36.385  17.805  45.908  1.00 24.55
ATOM   16573  CD2 LEU  2482      36.947  15.854  47.372  1.00 19.98
ATOM   16574  C   LEU  2482      32.569  15.397  45.178  1.00 19.82
ATOM   16575  O   LEU  2482      31.701  15.752  45.972  1.00 21.78
ATOM   16576  N   ALA  2483      32.432  14.323  44.411  1.00 16.25
ATOM   16577  CA  ALA  2483      31.240  13.493  44.541  1.00 16.04
ATOM   16578  CB  ALA  2483      30.348  13.636  43.323  1.00 15.47
ATOM   16579  C   ALA  2483      31.678  12.051  44.714  1.00 14.99
ATOM   16580  O   ALA  2483      32.594  11.591  44.039  1.00 14.48
ATOM   16581  N   ASP  2484      31.033  11.346  45.636  1.00 14.00
ATOM   16582  CA  ASP  2484      31.363   9.952  45.907  1.00 16.62
ATOM   16583  CB  ASP  2484      30.819   9.508  47.265  1.00 18.12
```

```
ATOM   16584  CG   ASP   2484      31.751    9.800   48.420   1.00 21.09
ATOM   16585  OD1  ASP   2484      32.952   10.027   48.201   1.00 23.51
ATOM   16586  OD2  ASP   2484      31.259    9.765   49.567   1.00 25.92
ATOM   16587  C    ASP   2484      30.751    8.990   44.906   1.00 16.88
ATOM   16588  O    ASP   2484      29.679    9.252   44.362   1.00 17.02
ATOM   16589  N    LEU   2485      31.437    7.878   44.664   1.00 16.05
ATOM   16590  CA   LEU   2485      30.856    6.828   43.837   1.00 16.81
ATOM   16591  CB   LEU   2485      31.887    6.120   42.968   1.00 17.36
ATOM   16592  CG   LEU   2485      32.362    6.967   41.791   1.00 18.54
ATOM   16593  CD1  LEU   2485      33.158    6.088   40.829   1.00 19.06
ATOM   16594  CD2  LEU   2485      31.157    7.568   41.072   1.00 18.74
ATOM   16595  C    LEU   2485      30.367    5.900   44.936   1.00 15.90
ATOM   16596  O    LEU   2485      31.145    5.447   45.773   1.00 16.45
ATOM   16597  N    PRO   2486      29.057    5.638   44.970   1.00 17.02
ATOM   16598  CD   PRO   2486      28.055    6.209   44.052   1.00 16.98
ATOM   16599  CA   PRO   2486      28.427    4.777   45.968   1.00 15.60
ATOM   16600  CB   PRO   2486      26.937    5.042   45.750   1.00 15.78
ATOM   16601  CG   PRO   2486      26.860    5.312   44.276   1.00 16.02
ATOM   16602  C    PRO   2486      28.778    3.287   45.908   1.00 14.53
ATOM   16603  O    PRO   2486      29.499    2.822   45.025   1.00 14.20
ATOM   16604  N    PHE   2487      28.267    2.559   46.890   1.00 14.83
ATOM   16605  CA   PHE   2487      28.469    1.125   47.011   1.00 15.84
ATOM   16606  CB   PHE   2487      27.501    0.583   48.074   1.00 15.61
ATOM   16607  CG   PHE   2487      27.356   -0.919   48.083   1.00 17.92
ATOM   16608  CD1  PHE   2487      28.450   -1.746   48.328   1.00 16.77
ATOM   16609  CD2  PHE   2487      26.106   -1.504   47.874   1.00 15.14
ATOM   16610  CE1  PHE   2487      28.302   -3.131   48.369   1.00 18.81
ATOM   16611  CE2  PHE   2487      25.948   -2.887   47.913   1.00 18.55
ATOM   16612  CZ   PHE   2487      27.050   -3.706   48.160   1.00 17.93
ATOM   16613  C    PHE   2487      28.283    0.389   45.676   1.00 16.50
ATOM   16614  O    PHE   2487      27.257    0.535   45.007   1.00 15.22
ATOM   16615  N    MET   2488      29.297   -0.390   45.302   1.00 16.30
ATOM   16616  CA   MET   2488      29.305   -1.193   44.077   1.00 16.43
ATOM   16617  CB   MET   2488      28.265   -2.320   44.174   1.00 17.44
ATOM   16618  CG   MET   2488      28.596   -3.554   43.353   1.00 17.50
ATOM   16619  SD   MET   2488      30.158   -4.247   43.921   1.00 15.86
ATOM   16620  CE   MET   2488      29.646   -5.320   45.243   1.00 15.24
ATOM   16621  C    MET   2488      29.084   -0.384   42.804   1.00 18.13
ATOM   16622  O    MET   2488      28.516   -0.882   41.827   1.00 17.92
ATOM   16623  N    ALA   2489      29.547    0.862   42.810   1.00 15.73
ATOM   16624  CA   ALA   2489      29.417    1.732   41.643   1.00 16.90
ATOM   16625  CB   ALA   2489      28.963    3.133   42.074   1.00 15.45
ATOM   16626  C    ALA   2489      30.750    1.807   40.891   1.00 14.87
ATOM   16627  O    ALA   2489      30.887    2.539   39.916   1.00 16.09
ATOM   16628  N    TYR   2490      31.731    1.040   41.352   1.00 16.77
ATOM   16629  CA   TYR   2490      33.043    1.000   40.705   1.00 16.61
ATOM   16630  CB   TYR   2490      33.978    2.071   41.293   1.00 17.08
ATOM   16631  CG   TYR   2490      34.015    2.131   42.812   1.00 19.16
ATOM   16632  CD1  TYR   2490      35.039    1.521   43.538   1.00 18.38
ATOM   16633  CE1  TYR   2490      35.062    1.572   44.939   1.00 18.54
ATOM   16634  CD2  TYR   2490      33.011    2.795   43.519   1.00 20.42
ATOM   16635  CE2  TYR   2490      33.017    2.855   44.907   1.00 20.22
ATOM   16636  CZ   TYR   2490      34.042    2.244   45.613   1.00 21.20
ATOM   16637  OH   TYR   2490      34.038    2.326   46.990   1.00 19.10
ATOM   16638  C    TYR   2490      33.652   -0.390   40.875   1.00 16.36
ATOM   16639  O    TYR   2490      34.842   -0.532   41.154   1.00 15.49
ATOM   16640  N    ALA   2491      32.821   -1.413   40.687   1.00 15.34
ATOM   16641  CA   ALA   2491      33.240   -2.806   40.845   1.00 16.21
ATOM   16642  CB   ALA   2491      32.016   -3.716   40.865   1.00 16.00
ATOM   16643  C    ALA   2491      34.218   -3.256   39.765   1.00 16.41
ATOM   16644  O    ALA   2491      34.948   -4.229   39.945   1.00 16.54
ATOM   16645  N    THR   2492      34.196   -2.571   38.631   1.00 16.89
ATOM   16646  CA   THR   2492      35.127   -2.863   37.544   1.00 18.84
ATOM   16647  CB   THR   2492      34.507   -3.747   36.423   1.00 17.42
ATOM   16648  OG1  THR   2492      33.628   -2.948   35.619   1.00 19.01
ATOM   16649  CG2  THR   2492      33.753   -4.919   37.015   1.00 16.56
ATOM   16650  C    THR   2492      35.476   -1.517   36.939   1.00 19.20
ATOM   16651  O    THR   2492      34.705   -0.563   37.040   1.00 17.78
ATOM   16652  N    PRO   2493      36.655   -1.416   36.316   1.00 20.58
ATOM   16653  CD   PRO   2493      37.710   -2.440   36.217   1.00 22.28
ATOM   16654  CA   PRO   2493      37.080   -0.163   35.696   1.00 21.26
ATOM   16655  CB   PRO   2493      38.359   -0.561   34.968   1.00 22.19
ATOM   16656  CG   PRO   2493      38.925   -1.615   35.861   1.00 22.73
ATOM   16657  C    PRO   2493      36.031    0.379   34.737   1.00 21.17
ATOM   16658  O    PRO   2493      35.718    1.567   34.752   1.00 20.07
ATOM   16659  N    GLU   2494      35.477   -0.497   33.906   1.00 21.51
ATOM   16660  CA   GLU   2494      34.485   -0.062   32.934   1.00 22.98
```

```
ATOM   16661  CB  GLU  2494      34.027  -1.249  32.078  1.00 27.93
ATOM   16662  CG  GLU  2494      33.193  -0.865  30.862  1.00 35.30
ATOM   16663  CD  GLU  2494      33.127  -1.979  29.825  1.00 39.26
ATOM   16664  OE1 GLU  2494      32.813  -3.129  30.207  1.00 40.58
ATOM   16665  OE2 GLU  2494      33.381  -1.701  28.629  1.00 41.62
ATOM   16666  C   GLU  2494      33.296   0.596  33.629  1.00 21.02
ATOM   16667  O   GLU  2494      32.867   1.674  33.236  1.00 20.30
ATOM   16668  N   GLN  2495      32.768  -0.043  34.663  1.00 19.92
ATOM   16669  CA  GLN  2495      31.638   0.536  35.377  1.00 21.90
ATOM   16670  CB  GLN  2495      31.103  -0.446  36.411  1.00 25.01
ATOM   16671  CG  GLN  2495      30.627  -1.747  35.803  1.00 32.47
ATOM   16672  CD  GLN  2495      29.946  -2.626  36.814  1.00 34.62
ATOM   16673  OE1 GLN  2495      28.836  -2.332  37.259  1.00 37.69
ATOM   16674  NE2 GLN  2495      30.614  -3.707  37.202  1.00 39.43
ATOM   16675  C   GLN  2495      32.044   1.835  36.056  1.00 18.71
ATOM   16676  O   GLN  2495      31.269   2.788  36.101  1.00 16.24
ATOM   16677  N   ALA  2496      33.263   1.870  36.583  1.00 18.87
ATOM   16678  CA  ALA  2496      33.756   3.073  37.236  1.00 18.29
ATOM   16679  CB  ALA  2496      35.161   2.842  37.789  1.00 19.37
ATOM   16680  C   ALA  2496      33.758   4.249  36.258  1.00 17.83
ATOM   16681  O   ALA  2496      33.373   5.355  36.626  1.00 17.54
ATOM   16682  N   PHE  2497      34.181   4.018  35.014  1.00 17.22
ATOM   16683  CA  PHE  2497      34.215   5.104  34.033  1.00 16.32
ATOM   16684  CB  PHE  2497      34.777   4.639  32.680  1.00 15.77
ATOM   16685  CG  PHE  2497      36.109   3.944  32.763  1.00 16.08
ATOM   16686  CD1 PHE  2497      37.023   4.262  33.763  1.00 17.05
ATOM   16687  CD2 PHE  2497      36.453   2.976  31.822  1.00 19.05
ATOM   16688  CE1 PHE  2497      38.264   3.626  33.831  1.00 18.78
ATOM   16689  CE2 PHE  2497      37.686   2.334  31.876  1.00 18.30
ATOM   16690  CZ  PHE  2497      38.594   2.660  32.885  1.00 19.48
ATOM   16691  C   PHE  2497      32.817   5.659  33.796  1.00 16.99
ATOM   16692  O   PHE  2497      32.616   6.872  33.761  1.00 15.02
ATOM   16693  N   GLU  2498      31.860   4.753  33.624  1.00 17.61
ATOM   16694  CA  GLU  2498      30.474   5.121  33.364  1.00 19.06
ATOM   16695  CB  GLU  2498      29.635   3.854  33.162  1.00 22.66
ATOM   16696  CG  GLU  2498      28.212   4.090  32.676  1.00 28.82
ATOM   16697  CD  GLU  2498      28.165   4.785  31.322  1.00 33.26
ATOM   16698  OE1 GLU  2498      29.130   4.638  30.536  1.00 33.89
ATOM   16699  OE2 GLU  2498      27.156   5.469  31.038  1.00 35.72
ATOM   16700  C   GLU  2498      29.880   5.947  34.499  1.00 18.47
ATOM   16701  O   GLU  2498      29.368   7.049  34.281  1.00 19.38
ATOM   16702  N   ASN  2499      29.954   5.413  35.711  1.00 18.25
ATOM   16703  CA  ASN  2499      29.392   6.105  36.869  1.00 19.15
ATOM   16704  CB  ASN  2499      29.335   5.157  38.070  1.00 19.68
ATOM   16705  CG  ASN  2499      28.385   3.997  37.839  1.00 19.41
ATOM   16706  OD1 ASN  2499      27.309   4.178  37.269  1.00 21.49
ATOM   16707  ND2 ASN  2499      28.767   2.811  38.283  1.00 18.16
ATOM   16708  C   ASN  2499      30.125   7.397  37.225  1.00 19.51
ATOM   16709  O   ASN  2499      29.513   8.347  37.723  1.00 18.86
ATOM   16710  N   ALA  2500      31.429   7.440  36.965  1.00 20.06
ATOM   16711  CA  ALA  2500      32.207   8.641  37.239  1.00 19.16
ATOM   16712  CB  ALA  2500      33.694   8.367  37.043  1.00 19.94
ATOM   16713  C   ALA  2500      31.748   9.734  36.284  1.00 19.10
ATOM   16714  O   ALA  2500      31.472  10.858  36.695  1.00 18.94
ATOM   16715  N   ALA  2501      31.652   9.389  35.004  1.00 17.77
ATOM   16716  CA  ALA  2501      31.229  10.339  33.991  1.00 16.26
ATOM   16717  CB  ALA  2501      31.220   9.670  32.608  1.00 16.19
ATOM   16718  C   ALA  2501      29.850  10.905  34.303  1.00 15.89
ATOM   16719  O   ALA  2501      29.592  12.070  34.028  1.00 18.58
ATOM   16720  N   THR  2502      28.963  10.081  34.862  1.00 16.35
ATOM   16721  CA  THR  2502      27.605  10.524  35.200  1.00 16.80
ATOM   16722  CB  THR  2502      26.731   9.356  35.721  1.00 18.71
ATOM   16723  OG1 THR  2502      26.565   8.386  34.685  1.00 18.62
ATOM   16724  CG2 THR  2502      25.358   9.859  36.148  1.00 18.69
ATOM   16725  C   THR  2502      27.629  11.594  36.281  1.00 16.73
ATOM   16726  O   THR  2502      26.919  12.592  36.204  1.00 16.10
ATOM   16727  N   VAL  2503      28.441  11.355  37.301  1.00 16.73
ATOM   16728  CA  VAL  2503      28.582  12.280  38.416  1.00 19.12
ATOM   16729  CB  VAL  2503      29.336  11.588  39.565  1.00 21.79
ATOM   16730  CG1 VAL  2503      29.985  12.604  40.454  1.00 26.41
ATOM   16731  CG2 VAL  2503      28.365  10.712  40.355  1.00 18.83
ATOM   16732  C   VAL  2503      29.321  13.541  37.962  1.00 18.67
ATOM   16733  O   VAL  2503      29.040  14.649  38.435  1.00 18.94
ATOM   16734  N   MET  2504      30.260  13.362  37.037  1.00 18.34
ATOM   16735  CA  MET  2504      31.026  14.471  36.495  1.00 19.37
ATOM   16736  CB  MET  2504      32.211  13.958  35.669  1.00 22.55
ATOM   16737  CG  MET  2504      33.240  13.157  36.459  1.00 26.75
```

```
ATOM   16738  SD   MET  2504     34.195  14.200  37.555  1.00 33.58
ATOM   16739  CE   MET  2504     35.397  14.833  36.400  1.00 29.91
ATOM   16740  C    MET  2504     30.138  15.357  35.623  1.00 19.08
ATOM   16741  O    MET  2504     30.170  16.573  35.755  1.00 16.51
ATOM   16742  N    ARG  2505     29.341  14.757  34.738  1.00 18.93
ATOM   16743  CA   ARG  2505     28.476  15.553  33.883  1.00 19.02
ATOM   16744  CB   ARG  2505     27.748  14.672  32.853  1.00 19.49
ATOM   16745  CG   ARG  2505     28.673  13.917  31.888  1.00 22.49
ATOM   16746  CD   ARG  2505     27.903  13.299  30.717  1.00 23.75
ATOM   16747  NE   ARG  2505     28.708  12.314  29.985  1.00 25.72
ATOM   16748  CZ   ARG  2505     28.734  11.015  30.268  1.00 24.59
ATOM   16749  NH1  ARG  2505     27.997  10.536  31.261  1.00 22.81
ATOM   16750  NH2  ARG  2505     29.505  10.197  29.569  1.00 26.75
ATOM   16751  C    ARG  2505     27.451  16.298  34.728  1.00 17.69
ATOM   16752  O    ARG  2505     26.955  17.351  34.327  1.00 18.42
ATOM   16753  N    ALA  2506     27.145  15.755  35.902  1.00 17.09
ATOM   16754  CA   ALA  2506     26.164  16.363  36.800  1.00 18.48
ATOM   16755  CB   ALA  2506     25.652  15.325  37.797  1.00 17.12
ATOM   16756  C    ALA  2506     26.713  17.580  37.551  1.00 18.29
ATOM   16757  O    ALA  2506     25.957  18.298  38.208  1.00 18.33
ATOM   16758  N    GLY  2507     28.020  17.807  37.448  1.00 18.55
ATOM   16759  CA   GLY  2507     28.622  18.958  38.098  1.00 19.92
ATOM   16760  C    GLY  2507     29.863  18.732  38.943  1.00 20.81
ATOM   16761  O    GLY  2507     30.537  19.694  39.333  1.00 20.95
ATOM   16762  N    ALA  2508     30.183  17.478  39.238  1.00 20.50
ATOM   16763  CA   ALA  2508     31.354  17.193  40.062  1.00 19.08
ATOM   16764  CB   ALA  2508     31.328  15.748  40.526  1.00 18.45
ATOM   16765  C    ALA  2508     32.669  17.482  39.348  1.00 19.05
ATOM   16766  O    ALA  2508     32.776  17.332  38.134  1.00 18.04
ATOM   16767  N    ASN  2509     33.675  17.899  40.109  1.00 19.09
ATOM   16768  CA   ASN  2509     34.981  18.184  39.529  1.00 18.59
ATOM   16769  CB   ASN  2509     35.627  19.405  40.186  1.00 20.73
ATOM   16770  CG   ASN  2509     34.883  20.679  39.903  1.00 18.72
ATOM   16771  OD1  ASN  2509     34.720  21.074  38.748  1.00 17.99
ATOM   16772  ND2  ASN  2509     34.424  21.338  40.957  1.00 18.40
ATOM   16773  C    ASN  2509     35.905  17.000  39.756  1.00 19.28
ATOM   16774  O    ASN  2509     36.841  16.777  38.992  1.00 18.91
ATOM   16775  N    MET  2510     35.626  16.246  40.812  1.00 17.99
ATOM   16776  CA   MET  2510     36.448  15.115  41.203  1.00 19.45
ATOM   16777  CB   MET  2510     37.466  15.577  42.251  1.00 18.97
ATOM   16778  CG   MET  2510     38.433  14.524  42.759  1.00 23.50
ATOM   16779  SD   MET  2510     39.624  15.270  43.945  1.00 23.85
ATOM   16780  CE   MET  2510     41.036  15.618  42.863  1.00 24.62
ATOM   16781  C    MET  2510     35.576  14.020  41.784  1.00 20.19
ATOM   16782  O    MET  2510     34.505  14.289  42.327  1.00 18.96
ATOM   16783  N    VAL  2511     36.047  12.783  41.665  1.00 21.32
ATOM   16784  CA   VAL  2511     35.321  11.626  42.156  1.00 20.08
ATOM   16785  CB   VAL  2511     35.189  10.586  41.023  1.00 23.58
ATOM   16786  CG1  VAL  2511     34.622   9.304  41.560  1.00 26.75
ATOM   16787  CG2  VAL  2511     34.316  11.146  39.908  1.00 23.78
ATOM   16788  C    VAL  2511     36.035  10.991  43.347  1.00 19.91
ATOM   16789  O    VAL  2511     37.267  10.916  43.369  1.00 18.34
ATOM   16790  N    LYS  2512     35.268  10.547  44.340  1.00 17.54
ATOM   16791  CA   LYS  2512     35.850   9.902  45.513  1.00 18.90
ATOM   16792  CB   LYS  2512     35.473  10.648  46.803  1.00 19.77
ATOM   16793  CG   LYS  2512     36.064   9.979  48.044  1.00 21.40
ATOM   16794  CD   LYS  2512     36.198  10.915  49.233  1.00 23.09
ATOM   16795  CE   LYS  2512     34.908  11.031  50.024  1.00 23.73
ATOM   16796  NZ   LYS  2512     34.461   9.709  50.567  1.00 21.38
ATOM   16797  C    LYS  2512     35.407   8.442  45.620  1.00 19.54
ATOM   16798  O    LYS  2512     34.219   8.137  45.525  1.00 20.01
ATOM   16799  N    ILE  2513     36.370   7.545  45.817  1.00 17.93
ATOM   16800  CA   ILE  2513     36.085   6.117  45.923  1.00 17.40
ATOM   16801  CB   ILE  2513     36.447   5.384  44.607  1.00 17.97
ATOM   16802  CG2  ILE  2513     35.518   5.836  43.489  1.00 17.02
ATOM   16803  CG1  ILE  2513     37.896   5.694  44.213  1.00 18.73
ATOM   16804  CD1  ILE  2513     38.353   4.974  42.946  1.00 18.72
ATOM   16805  C    ILE  2513     36.849   5.491  47.084  1.00 18.41
ATOM   16806  O    ILE  2513     37.994   5.858  47.353  1.00 18.45
ATOM   16807  N    GLU  2514     36.204   4.548  47.765  1.00 18.60
ATOM   16808  CA   GLU  2514     36.776   3.861  48.922  1.00 18.49
ATOM   16809  CB   GLU  2514     35.662   3.542  49.925  1.00 19.81
ATOM   16810  CG   GLU  2514     34.827   4.743  50.360  1.00 20.46
ATOM   16811  CD   GLU  2514     33.621   4.347  51.222  1.00 23.36
ATOM   16812  OE1  GLU  2514     33.542   3.176  51.644  1.00 22.24
ATOM   16813  OE2  GLU  2514     32.760   5.212  51.484  1.00 23.56
ATOM   16814  C    GLU  2514     37.512   2.566  48.571  1.00 19.66
```

```
ATOM   16815  O    GLU   2514      37.045    1.777   47.755   1.00 18.14
ATOM   16816  N    GLY   2515      38.665    2.339   49.189   1.00 20.64
ATOM   16817  CA   GLY   2515      39.389    1.117   48.896   1.00 20.29
ATOM   16818  C    GLY   2515      40.890    1.288   48.808   1.00 19.74
ATOM   16819  O    GLY   2515      41.393    2.371   48.501   1.00 18.88
ATOM   16820  N    GLY   2516      41.602    0.198   49.065   1.00 19.47
ATOM   16821  CA   GLY   2516      43.052    0.224   49.033   1.00 18.59
ATOM   16822  C    GLY   2516      43.687   -0.132   47.703   1.00 18.48
ATOM   16823  O    GLY   2516      43.242    0.303   46.639   1.00 17.54
ATOM   16824  N    GLU   2517      44.725   -0.955   47.769   1.00 20.76
ATOM   16825  CA   GLU   2517      45.467   -1.341   46.580   1.00 23.29
ATOM   16826  CB   GLU   2517      46.637   -2.242   46.974   1.00 27.23
ATOM   16827  CG   GLU   2517      47.689   -2.380   45.888   1.00 32.03
ATOM   16828  CD   GLU   2517      48.937   -3.090   46.367   1.00 36.09
ATOM   16829  OE1  GLU   2517      49.853   -3.300   45.539   1.00 38.84
ATOM   16830  OE2  GLU   2517      49.005   -3.435   47.569   1.00 37.39
ATOM   16831  C    GLU   2517      44.676   -1.992   45.445   1.00 23.15
ATOM   16832  O    GLU   2517      45.079   -1.892   44.286   1.00 22.58
ATOM   16833  N    TRP   2518      43.560   -2.652   45.749   1.00 22.67
ATOM   16834  CA   TRP   2518      42.791   -3.292   44.682   1.00 23.53
ATOM   16835  CB   TRP   2518      41.619   -4.120   45.244   1.00 24.36
ATOM   16836  CG   TRP   2518      40.473   -3.335   45.824   1.00 24.10
ATOM   16837  CD2  TRP   2518      39.271   -2.943   45.143   1.00 23.30
ATOM   16838  CE2  TRP   2518      38.466   -2.252   46.078   1.00 23.70
ATOM   16839  CE3  TRP   2518      38.797   -3.108   43.837   1.00 22.85
ATOM   16840  CD1  TRP   2518      40.352   -2.874   47.107   1.00 25.21
ATOM   16841  NE1  TRP   2518      39.147   -2.226   47.266   1.00 24.49
ATOM   16842  CZ2  TRP   2518      37.209   -1.726   45.745   1.00 22.66
ATOM   16843  CZ3  TRP   2518      37.541   -2.585   43.503   1.00 23.85
ATOM   16844  CH2  TRP   2518      36.765   -1.903   44.456   1.00 20.90
ATOM   16845  C    TRP   2518      42.267   -2.282   43.666   1.00 22.18
ATOM   16846  O    TRP   2518      41.875   -2.651   42.560   1.00 24.23
ATOM   16847  N    LEU   2519      42.283   -1.006   44.042   1.00 21.97
ATOM   16848  CA   LEU   2519      41.804    0.080   43.184   1.00 19.59
ATOM   16849  CB   LEU   2519      41.185    1.180   44.043   1.00 20.80
ATOM   16850  CG   LEU   2519      39.771    0.921   44.553   1.00 20.95
ATOM   16851  CD1  LEU   2519      39.347    2.037   45.517   1.00 20.03
ATOM   16852  CD2  LEU   2519      38.824    0.853   43.358   1.00 19.11
ATOM   16853  C    LEU   2519      42.855    0.724   42.292   1.00 20.90
ATOM   16854  O    LEU   2519      42.525    1.556   41.444   1.00 20.68
ATOM   16855  N    VAL   2520      44.117    0.361   42.483   1.00 19.40
ATOM   16856  CA   VAL   2520      45.186    0.955   41.692   1.00 18.98
ATOM   16857  CB   VAL   2520      46.513    0.172   41.864   1.00 19.23
ATOM   16858  CG1  VAL   2520      47.524    0.629   40.825   1.00 20.17
ATOM   16859  CG2  VAL   2520      47.073    0.413   43.262   1.00 21.65
ATOM   16860  C    VAL   2520      44.870    1.070   40.206   1.00 18.55
ATOM   16861  O    VAL   2520      44.981    2.149   39.630   1.00 18.33
ATOM   16862  N    GLU   2521      44.475   -0.037   39.590   1.00 17.61
ATOM   16863  CA   GLU   2521      44.159   -0.037   38.168   1.00 21.27
ATOM   16864  CB   GLU   2521      43.770   -1.448   37.729   1.00 25.74
ATOM   16865  CG   GLU   2521      43.404   -1.568   36.261   1.00 31.82
ATOM   16866  CD   GLU   2521      43.139   -3.009   35.856   1.00 35.80
ATOM   16867  OE1  GLU   2521      42.203   -3.633   36.408   1.00 37.34
ATOM   16868  OE2  GLU   2521      43.871   -3.520   34.985   1.00 39.34
ATOM   16869  C    GLU   2521      43.037    0.942   37.828   1.00 19.73
ATOM   16870  O    GLU   2521      43.137    1.721   36.879   1.00 18.47
ATOM   16871  N    THR   2522      41.967    0.909   38.611   1.00 18.72
ATOM   16872  CA   THR   2522      40.834    1.789   38.360   1.00 17.06
ATOM   16873  CB   THR   2522      39.696    1.466   39.341   1.00 17.53
ATOM   16874  OG1  THR   2522      39.327    0.087   39.182   1.00 18.32
ATOM   16875  CG2  THR   2522      38.481    2.339   39.074   1.00 16.11
ATOM   16876  C    THR   2522      41.232    3.256   38.469   1.00 17.09
ATOM   16877  O    THR   2522      40.808    4.089   37.668   1.00 16.74
ATOM   16878  N    VAL   2523      42.060    3.580   39.452   1.00 18.90
ATOM   16879  CA   VAL   2523      42.488    4.968   39.614   1.00 18.66
ATOM   16880  CB   VAL   2523      43.295    5.155   40.910   1.00 19.35
ATOM   16881  CG1  VAL   2523      43.779    6.595   41.011   1.00 20.95
ATOM   16882  CG2  VAL   2523      42.442    4.799   42.116   1.00 18.48
ATOM   16883  C    VAL   2523      43.345    5.398   38.419   1.00 18.29
ATOM   16884  O    VAL   2523      43.141    6.476   37.858   1.00 18.36
ATOM   16885  N    GLN   2524      44.309    4.563   38.038   1.00 16.98
ATOM   16886  CA   GLN   2524      45.174    4.894   36.907   1.00 19.97
ATOM   16887  CB   GLN   2524      46.169    3.761   36.626   1.00 21.97
ATOM   16888  CG   GLN   2524      47.125    3.462   37.769   1.00 28.49
ATOM   16889  CD   GLN   2524      48.108    2.355   37.429   1.00 32.31
ATOM   16890  OE1  GLN   2524      47.711    1.273   36.998   1.00 33.90
ATOM   16891  NE2  GLN   2524      49.400    2.619   37.627   1.00 32.72
```

```
ATOM   16892  C    GLN  2524      44.359    5.153   35.648   1.00  20.47
ATOM   16893  O    GLN  2524      44.572    6.146   34.950   1.00  19.34
ATOM   16894  N    MET  2525      43.420    4.258   35.360   1.00  19.30
ATOM   16895  CA   MET  2525      42.600    4.385   34.163   1.00  20.94
ATOM   16896  CB   MET  2525      41.853    3.076   33.908   1.00  20.76
ATOM   16897  CG   MET  2525      42.796    1.931   33.555   1.00  22.97
ATOM   16898  SD   MET  2525      41.953    0.379   33.211   1.00  25.66
ATOM   16899  CE   MET  2525      41.613    0.585   31.487   1.00  26.72
ATOM   16900  C    MET  2525      41.638    5.558   34.213   1.00  21.37
ATOM   16901  O    MET  2525      41.439    6.233   33.208   1.00  21.66
ATOM   16902  N    LEU  2526      41.044    5.808   35.375   1.00  21.24
ATOM   16903  CA   LEU  2526      40.129    6.935   35.503   1.00  20.80
ATOM   16904  CB   LEU  2526      39.502    6.964   36.900   1.00  17.52
ATOM   16905  CG   LEU  2526      38.292    6.075   37.149   1.00  16.74
ATOM   16906  CD1  LEU  2526      37.996    6.041   38.641   1.00  15.92
ATOM   16907  CD2  LEU  2526      37.095    6.606   36.373   1.00  16.60
ATOM   16908  C    LEU  2526      40.878    8.241   35.263   1.00  21.12
ATOM   16909  O    LEU  2526      40.404    9.124   34.546   1.00  21.66
ATOM   16910  N    THR  2527      42.059    8.353   35.860   1.00  22.05
ATOM   16911  CA   THR  2527      42.875    9.555   35.725   1.00  24.14
ATOM   16912  CB   THR  2527      44.186    9.419   36.521   1.00  24.39
ATOM   16913  OG1  THR  2527      43.879    9.270   37.914   1.00  27.58
ATOM   16914  CG2  THR  2527      45.061   10.656   36.334   1.00  27.09
ATOM   16915  C    THR  2527      43.217    9.883   34.276   1.00  25.83
ATOM   16916  O    THR  2527      43.061   11.020   33.838   1.00  26.77
ATOM   16917  N    GLU  2528      43.679    8.888   33.529   1.00  27.93
ATOM   16918  CA   GLU  2528      44.042    9.127   32.138   1.00  29.80
ATOM   16919  CB   GLU  2528      44.815    7.935   31.578   1.00  31.80
ATOM   16920  CG   GLU  2528      43.995    6.697   31.350   1.00  32.54
ATOM   16921  CD   GLU  2528      44.836    5.567   30.791   1.00  34.95
ATOM   16922  OE1  GLU  2528      45.737    5.857   29.977   1.00  35.69
ATOM   16923  OE2  GLU  2528      44.599    4.397   31.157   1.00  32.66
ATOM   16924  C    GLU  2528      42.827    9.429   31.265   1.00  28.28
ATOM   16925  O    GLU  2528      42.971    9.896   30.135   1.00  28.14
ATOM   16926  N    ARG  2529      41.634    9.174   31.797   1.00  28.80
ATOM   16927  CA   ARG  2529      40.395    9.431   31.069   1.00  28.26
ATOM   16928  CB   ARG  2529      39.452    8.230   31.205   1.00  26.83
ATOM   16929  CG   ARG  2529      39.946    7.014   30.427   1.00  26.61
ATOM   16930  CD   ARG  2529      39.231    5.732   30.796   1.00  23.98
ATOM   16931  NE   ARG  2529      39.737    4.615   30.003   1.00  24.06
ATOM   16932  CZ   ARG  2529      40.992    4.180   30.041   1.00  25.03
ATOM   16933  NH1  ARG  2529      41.879    4.759   30.838   1.00  23.39
ATOM   16934  NH2  ARG  2529      41.368    3.171   29.270   1.00  24.77
ATOM   16935  C    ARG  2529      39.702   10.713   31.530   1.00  28.54
ATOM   16936  O    ARG  2529      38.478   10.827   31.465   1.00  28.70
ATOM   16937  N    ALA  2530      40.503   11.667   32.001   1.00  28.59
ATOM   16938  CA   ALA  2530      40.018   12.970   32.452   1.00  26.75
ATOM   16939  CB   ALA  2530      39.218   13.637   31.332   1.00  29.24
ATOM   16940  C    ALA  2530      39.196   12.970   33.737   1.00  26.34
ATOM   16941  O    ALA  2530      38.391   13.876   33.953   1.00  25.02
ATOM   16942  N    VAL  2531      39.400   11.974   34.595   1.00  23.38
ATOM   16943  CA   VAL  2531      38.655   11.907   35.849   1.00  23.24
ATOM   16944  CB   VAL  2531      37.802   10.617   35.933   1.00  22.38
ATOM   16945  CG1  VAL  2531      37.001   10.605   37.222   1.00  24.98
ATOM   16946  CG2  VAL  2531      36.874   10.530   34.740   1.00  23.60
ATOM   16947  C    VAL  2531      39.549   11.968   37.089   1.00  22.08
ATOM   16948  O    VAL  2531      40.180   10.979   37.464   1.00  20.71
ATOM   16949  N    PRO  2532      39.618   13.137   37.743   1.00  22.24
ATOM   16950  CD   PRO  2532      38.951   14.412   37.439   1.00  23.52
ATOM   16951  CA   PRO  2532      40.450   13.259   38.944   1.00  22.45
ATOM   16952  CB   PRO  2532      40.414   14.757   39.238   1.00  22.66
ATOM   16953  CG   PRO  2532      39.070   15.148   38.756   1.00  25.65
ATOM   16954  C    PRO  2532      39.836   12.421   40.057   1.00  21.12
ATOM   16955  O    PRO  2532      38.623   12.446   40.255   1.00  21.74
ATOM   16956  N    VAL  2533      40.673   11.678   40.773   1.00  19.42
ATOM   16957  CA   VAL  2533      40.208   10.802   41.837   1.00  18.80
ATOM   16958  CB   VAL  2533      40.670    9.345   41.596   1.00  18.15
ATOM   16959  CG1  VAL  2533      40.209    8.462   42.736   1.00  19.03
ATOM   16960  CG2  VAL  2533      40.134    8.832   40.263   1.00  18.13
ATOM   16961  C    VAL  2533      40.696   11.181   43.220   1.00  18.90
ATOM   16962  O    VAL  2533      41.844   11.587   43.389   1.00  19.13
ATOM   16963  N    CYS  2534      39.813   11.044   44.204   1.00  17.65
ATOM   16964  CA   CYS  2534      40.143   11.296   45.608   1.00  17.23
ATOM   16965  CB   CYS  2534      39.125   12.250   46.259   1.00  16.92
ATOM   16966  SG   CYS  2534      39.435   12.575   48.025   1.00  17.39
ATOM   16967  C    CYS  2534      40.038    9.922   46.265   1.00  17.85
ATOM   16968  O    CYS  2534      39.004    9.258   46.159   1.00  20.42
```

```
ATOM   16969  N    GLY  2535      41.107    9.481   46.917   1.00  16.91
ATOM   16970  CA   GLY  2535      41.084    8.192   47.580   1.00  17.14
ATOM   16971  C    GLY  2535      40.382    8.290   48.921   1.00  18.33
ATOM   16972  O    GLY  2535      40.041    9.388   49.362   1.00  19.66
ATOM   16973  N    HIS  2536      40.168    7.149   49.568   1.00  17.24
ATOM   16974  CA   HIS  2536      39.504    7.106   50.869   1.00  18.82
ATOM   16975  CB   HIS  2536      37.980    7.162   50.683   1.00  20.25
ATOM   16976  CG   HIS  2536      37.207    7.331   51.956   1.00  18.55
ATOM   16977  CD2  HIS  2536      37.537    7.091   53.248   1.00  19.79
ATOM   16978  ND1  HIS  2536      35.897    7.761   51.971   1.00  20.89
ATOM   16979  CE1  HIS  2536      35.453    7.777   53.215   1.00  19.89
ATOM   16980  NE2  HIS  2536      36.428    7.373   54.010   1.00  20.24
ATOM   16981  C    HIS  2536      39.922   -5.823   51.575   1.00  18.66
ATOM   16982  O    HIS  2536      39.620    4.717   51.123   1.00  19.56
ATOM   16983  N    LEU  2537      40.639    5.984   52.680   1.00  18.70
ATOM   16984  CA   LEU  2537      41.127    4.855   53.455   1.00  17.87
ATOM   16985  CB   LEU  2537      42.650    4.771   53.338   1.00  19.01
ATOM   16986  CG   LEU  2537      43.229    4.387   51.973   1.00  16.20
ATOM   16987  CD1  LEU  2537      44.757    4.537   51.995   1.00  16.71
ATOM   16988  CD2  LEU  2537      42.851    2.929   51.653   1.00  17.55
ATOM   16989  C    LEU  2537      40.737    4.977   54.926   1.00  19.09
ATOM   16990  O    LEU  2537      40.273    6.026   55.371   1.00  20.25
ATOM   16991  N    GLY  2538      40.960    3.901   55.670   1.00  18.13
ATOM   16992  CA   GLY  2538      40.633    3.882   57.078   1.00  19.82
ATOM   16993  C    GLY  2538      39.275    3.253   57.287   1.00  21.82
ATOM   16994  O    GLY  2538      39.013    2.131   56.843   1.00  22.22
ATOM   16995  N    LEU  2539      38.394    3.980   57.959   1.00  21.58
ATOM   16996  CA   LEU  2539      37.059    3.470   58.193   1.00  22.62
ATOM   16997  CB   LEU  2539      36.478    4.096   59.464   1.00  23.08
ATOM   16998  CG   LEU  2539      35.394    3.309   60.206   1.00  25.71
ATOM   16999  CD1  LEU  2539      34.896    4.150   61.377   1.00  27.15
ATOM   17000  CD2  LEU  2539      34.254    2.962   59.280   1.00  24.37
ATOM   17001  C    LEU  2539      36.213    3.830   56.977   1.00  22.01
ATOM   17002  O    LEU  2539      35.665    4.931   56.897   1.00  24.68
ATOM   17003  N    THR  2540      36.139    2.909   56.020   1.00  21.79
ATOM   17004  CA   THR  2540      35.350    3.100   54.801   1.00  23.60
ATOM   17005  CB   THR  2540      35.991    2.337   53.599   1.00  22.72
ATOM   17006  OG1  THR  2540      36.312    0.996   53.991   1.00  22.38
ATOM   17007  CG2  THR  2540      37.258    3.035   53.143   1.00  25.28
ATOM   17008  C    THR  2540      33.934    2.574   55.072   1.00  23.37
ATOM   17009  O    THR  2540      33.680    1.371   54.992   1.00  23.82
ATOM   17010  N    PRO  2541      32.997    3.483   55.403   1.00  24.67
ATOM   17011  CD   PRO  2541      33.189    4.941   55.330   1.00  25.29
ATOM   17012  CA   PRO  2541      31.595    3.165   55.711   1.00  23.91
ATOM   17013  CB   PRO  2541      30.927    4.543   55.801   1.00  25.13
ATOM   17014  CG   PRO  2541      31.817    5.420   54.989   1.00  29.14
ATOM   17015  C    PRO  2541      30.866    2.212   54.777   1.00  22.03
ATOM   17016  O    PRO  2541      29.964    1.489   55.212   1.00  21.27
ATOM   17017  N    GLN  2542      31.241    2.196   53.504   1.00  21.17
ATOM   17018  CA   GLN  2542      30.593    1.280   52.562   1.00  20.34
ATOM   17019  CB   GLN  2542      31.081    1.542   51.126   -1.00  19.40
ATOM   17020  CG   GLN  2542      30.468    2.776   50.462   1.00  19.10
ATOM   17021  CD   GLN  2542      31.057    3.072   49.090   1.00  20.00
ATOM   17022  OE1  GLN  2542      31.534    2.172   48.399   1.00  21.78
ATOM   17023  NE2  GLN  2542      31.014    4.335   48.686   1.00  18.53
ATOM   17024  C    GLN  2542      30.887   -0.166   52.962   1.00  20.22
ATOM   17025  O    GLN  2542      30.106   -1.067   52.659   1.00  21.15
ATOM   17026  N    SER  2543      32.005   -0.381   53.655   1.00  21.08
ATOM   17027  CA   SER  2543      32.392   -1.725   54.089   1.00  20.09
ATOM   17028  CB   SER  2543      33.903   -1.934   53.925   1.00  22.29
ATOM   17029  OG   SER  2543      34.275   -2.037   52.553   1.00  22.70
ATOM   17030  C    SER  2543      32.009   -2.008   55.541   1.00  20.40
ATOM   17031  O    SER  2543      32.533   -2.938   56.162   1.00  19.84
ATOM   17032  N    VAL  2544      31.084   -1.218   56.077   1.00  19.14
ATOM   17033  CA   VAL  2544      30.644   -1.391   57.455   1.00  20.23
ATOM   17034  CB   VAL  2544      29.416   -0.473   57.774   1.00  21.04
ATOM   17035  CG1  VAL  2544      28.242   -0.812   56.867   1.00  22.60
ATOM   17036  CG2  VAL  2544      29.031   -0.615   59.235   1.00  24.52
ATOM   17037  C    VAL  2544      30.301   -2.847   57.775   1.00  19.12
ATOM   17038  O    VAL  2544      30.623   -3.343   58.854   1.00  17.37
ATOM   17039  N    ASN  2545      29.659   -3.533   56.835   1.00  20.26
ATOM   17040  CA   ASN  2545      29.288   -4.923   57.041   1.00  21.25
ATOM   17041  CB   ASN  2545      28.350   -5.383   55.921   1.00  20.97
ATOM   17042  CG   ASN  2545      27.009   -4.683   55.969   1.00  19.71
ATOM   17043  OD1  ASN  2545      26.215   -4.912   56.881   1.00  19.36
ATOM   17044  ND2  ASN  2545      26.755   -3.806   54.997   1.00  20.75
ATOM   17045  C    ASN  2545      30.521   -5.820   57.101   1.00  22.83
```

```
ATOM   17046  O    ASN  2545      30.499   -6.877   57.726   1.00  23.72
ATOM   17047  N    ILE  2546      31.594   -5.395   56.443   1.00  22.99
ATOM   17048  CA   ILE  2546      32.839   -6.154   56.447   1.00  24.98
ATOM   17049  CB   ILE  2546      33.842   -5.623   55.379   1.00  25.25
ATOM   17050  CG2  ILE  2546      35.189   -6.332   55.529   1.00  24.01
ATOM   17051  CG1  ILE  2546      33.295   -5.852   53.968   1.00  25.29
ATOM   17052  CD1  ILE  2546      33.166   -7.330   53.587   1.00  25.88
ATOM   17053  C    ILE  2546      33.485   -6.028   57.827   1.00  26.31
ATOM   17054  O    ILE  2546      33.852   -7.027   58.445   1.00  25.76
ATOM   17055  N    PHE  2547      33.606   -4.794   58.309   1.00  26.71
ATOM   17056  CA   PHE  2547      34.214   -4.534   59.615   1.00  29.32
ATOM   17057  CB   PHE  2547      34.482   -3.033   59.802   1.00  29.87
ATOM   17058  CG   PHE  2547      35.258   -2.401   58.679   1.00  32.32
ATOM   17059  CD1  PHE  2547      36.474   -2.939   58.258   1.00  33.03
ATOM   17060  CD2  PHE  2547      34.782   -1.253   58.054   1.00  32.76
ATOM   17061  CE1  PHE  2547      37.204   -2.342   57.229   1.00  32.42
ATOM   17062  CE2  PHE  2547      35.504   -0.647   57.024   1.00  33.54
ATOM   17063  CZ   PHE  2547      36.719   -1.195   56.612   1.00  33.74
ATOM   17064  C    PHE  2547      33.325   -5.011   60.756   1.00  30.19
ATOM   17065  O    PHE  2547      33.814   -5.329   61.837   1.00  31.92
ATOM   17066  N    GLY  2548      32.020   -5.063   60.509   1.00  30.16
ATOM   17067  CA   GLY  2548      31.093   -5.483   61.541   1.00  30.32
ATOM   17068  C    GLY  2548      30.665   -4.284   62.367   1.00  31.76
ATOM   17069  O    GLY  2548      30.281   -4.412   63.529   1.00  33.19
ATOM   17070  N    GLY  2549      30.741   -3.106   61.756   1.00  32.09
ATOM   17071  CA   GLY  2549      30.361   -1.882   62.438   1.00  31.70
ATOM   17072  C    GLY  2549      31.326   -0.764   62.095   1.00  31.81
ATOM   17073  O    GLY  2549      32.223   -0.943   61.273   1.00  30.10
ATOM   17074  N    TYR  2550      31.151    0.394   62.722   1.00  32.22
ATOM   17075  CA   TYR  2550      32.030    1.525   62.467   1.00  33.59
ATOM   17076  CB   TYR  2550      31.229    2.827   62.456   1.00  34.84
ATOM   17077  CG   TYR  2550      30.084    2.806   61.470   1.00  36.99
ATOM   17078  CD1  TYR  2550      28.863    2.207   61.800   1.00  37.25
ATOM   17079  CE1  TYR  2550      27.821    2.140   60.875   1.00  38.43
ATOM   17080  CD2  TYR  2550      30.233    3.339   60.189   1.00  37.03
ATOM   17081  CE2  TYR  2550      29.201    3.275   59.255   1.00  37.75
ATOM   17082  CZ   TYR  2550      27.999    2.675   59.600   1.00  38.27
ATOM   17083  OH   TYR  2550      26.986    2.600   58.671   1.00  36.43
ATOM   17084  C    TYR  2550      33.105    1.564   63.546   1.00  34.34
ATOM   17085  O    TYR  2550      32.948    2.226   64.572   1.00  35.56
ATOM   17086  N    LYS  2551      34.194    0.840   63.306   1.00  32.76
ATOM   17087  CA   LYS  2551      35.298    0.752   64.254   1.00  32.19
ATOM   17088  CB   LYS  2551      35.598   -0.719   64.546   1.00  34.81
ATOM   17089  CG   LYS  2551      34.364   -1.541   64.900   1.00  38.01
ATOM   17090  CD   LYS  2551      34.699   -3.015   65.008   1.00  40.22
ATOM   17091  CE   LYS  2551      33.462   -3.851   65.283   1.00  41.88
ATOM   17092  NZ   LYS  2551      33.802   -5.302   65.396   1.00  44.79
ATOM   17093  C    LYS  2551      36.553    1.435   63.719   1.00  30.37
ATOM   17094  O    LYS  2551      36.786    1.462   62.513   1.00  30.25
ATOM   17095  N    VAL  2552      37.363    1.982   64.619   1.00  29.43
ATOM   17096  CA   VAL  2552      38.590    2.658   64.215   1.00  28.03
ATOM   17097  CB   VAL  2552      39.312    3.274   65.433   1.00  28.51
ATOM   17098  CG1  VAL  2552      40.619    3.922   65.001   1.00  26.74
ATOM   17099  CG2  VAL  2552      38.410    4.304   66.096   1.00  26.18
ATOM   17100  C    VAL  2552      39.512    1.662   63.518   1.00  27.85
ATOM   17101  O    VAL  2552      39.697    0.538   63.988   1.00  26.93
ATOM   17102  N    GLN  2553      40.085    2.080   62.395   1.00  27.87
ATOM   17103  CA   GLN  2553      40.973    1.217   61.626   1.00  29.57
ATOM   17104  CB   GLN  2553      40.523    1.196   60.162   1.00  30.19
ATOM   17105  CG   GLN  2553      40.399   -0.196   59.554   1.00  34.54
ATOM   17106  CD   GLN  2553      39.402   -1.069   60.292   1.00  34.33
ATOM   17107  OE1  GLN  2553      38.286   -0.641   60.594   1.00  35.02
ATOM   17108  NE2  GLN  2553      39.798   -2.303   60.582   1.00  37.14
ATOM   17109  C    GLN  2553      42.419    1.695   61.715   1.00  29.23
ATOM   17110  O    GLN  2553      42.686    2.813   62.152   1.00  29.38
ATOM   17111  N    GLY  2554      43.346    0.837   61.303   1.00  30.12
ATOM   17112  CA   GLY  2554      44.752    1.200   61.328   1.00  31.55
ATOM   17113  C    GLY  2554      45.499    0.751   62.568   1.00  33.25
ATOM   17114  O    GLY  2554      46.730    0.754   62.590   1.00  33.26
ATOM   17115  N    ARG  2555      44.755    0.371   63.602   1.00  33.75
ATOM   17116  CA   ARG  2555      45.350   -0.088   64.851   1.00  34.75
ATOM   17117  CB   ARG  2555      44.253   -0.548   65.818   1.00  36.93
ATOM   17118  CG   ARG  2555      43.309    0.558   66.303   1.00  39.18
ATOM   17119  CD   ARG  2555      43.894    1.309   67.489   1.00  40.08
ATOM   17120  NE   ARG  2555      42.993    2.331   68.030   1.00  39.43
ATOM   17121  CZ   ARG  2555      41.807    2.081   68.580   1.00  40.99
ATOM   17122  NH1  ARG  2555      41.356    0.836   68.666   1.00  41.89
```

```
ATOM   17123  NH2 ARG  2555      41.075    3.079   69.058  1.00 38.37
ATOM   17124  C   ARG  2555      46.310   -1.242   64.581  1.00 34.23
ATOM   17125  O   ARG  2555      45.958   -2.208   63.903  1.00 33.15
ATOM   17126  N   GLY  2556      47.523   -1.140   65.114  1.00 34.60
ATOM   17127  CA  GLY  2556      48.503   -2.194   64.912  1.00 35.58
ATOM   17128  C   GLY  2556      49.469   -1.893   63.784  1.00 35.76
ATOM   17129  O   GLY  2556      49.157   -1.128   62.872  1.00 35.13
ATOM   17130  N   ASP  2557      50.647   -2.505   63.839  1.00 36.48
ATOM   17131  CA  ASP  2557      51.663   -2.282   62.819  1.00 36.98
ATOM   17132  CB  ASP  2557      52.984   -2.932   63.231  1.00 37.65
ATOM   17133  CG  ASP  2557      53.604   -2.265   64.437  1.00 38.08
ATOM   17134  OD1 ASP  2557      53.271   -1.088   64.697  1.00 38.16
ATOM   17135  OD2 ASP  2557      54.434   -2.909   65.115  1.00 38.66
ATOM   17136  C   ASP  2557      51.266   -2.776   61.439  1.00 36.71
ATOM   17137  O   ASP  2557      51.405   -2.049   60.457  1.00 38.15
ATOM   17138  N   GLU  2558      50.777   -4.009   61.358  1.00 36.83
ATOM   17139  CA  GLU  2558      50.381   -4.573   60.074  1.00 37.15
ATOM   17140  CB  GLU  2558      49.895   -6.012   60.242  1.00 40.41
ATOM   17141  CG  GLU  2558      49.768   -6.763   58.928  1.00 44.93
ATOM   17142  CD  GLU  2558      48.831   -7.946   59.018  1.00 47.28
ATOM   17143  OE1 GLU  2558      49.026   -8.794   59.916  1.00 48.79
ATOM   17144  OE2 GLU  2558      47.899   -8.027   58.187  1.00 48.79
ATOM   17145  C   GLU  2558      49.270   -3.740   59.450  1.00 36.06
ATOM   17146  O   GLU  2558      49.344   -3.363   58.280  1.00 34.74
ATOM   17147  N   ALA  2559      48.239   -3.456   60.240  1.00 33.89
ATOM   17148  CA  ALA  2559      47.114   -2.665   59.763  1.00 32.57
ATOM   17149  CB  ALA  2559      46.037   -2.571   60.846  1.00 32.43
ATOM   17150  C   ALA  2559      47.590   -1.274   59.366  1.00 30.42
ATOM   17151  O   ALA  2559      47.180   -0.739   58.338  1.00 30.62
ATOM   17152  N   GLY  2560      48.460   -0.694   60.188  1.00 28.46
ATOM   17153  CA  GLY  2560      48.978    0.630   59.898  1.00 26.73
ATOM   17154  C   GLY  2560      49.817    0.672   58.633  1.00 25.98
ATOM   17155  O   GLY  2560      49.664    1.574   57.811  1.00 25.52
ATOM   17156  N   ASP  2561      50.703   -0.305   58.465  1.00 25.18
ATOM   17157  CA  ASP  2561      51.558   -0.339   57.285  1.00 24.81
ATOM   17158  CB  ASP  2561      52.603   -1.451   57.401  1.00 26.12
ATOM   17159  CG  ASP  2561      53.606   -1.197   58.507  1.00 26.29
ATOM   17160  OD1 ASP  2561      53.951   -0.020   58.744  1.00 27.90
ATOM   17161  OD2 ASP  2561      54.064   -2.178   59.127  1.00 29.88
ATOM   17162  C   ASP  2561      50.731   -0.545   56.022  1.00 24.94
ATOM   17163  O   ASP  2561      51.032    0.020   54.967  1.00 25.26
ATOM   17164  N   GLN  2562      49.681   -1.351   56.127  1.00 25.61
ATOM   17165  CA  GLN  2562      48.829   -1.612   54.975  1.00 24.70
ATOM   17166  CB  GLN  2562      47.763   -2.651   55.324  1.00 27.82
ATOM   17167  CG  GLN  2562      46.939   -3.080   54.123  1.00 28.73
ATOM   17168  CD  GLN  2562      47.781   -3.794   53.087  1.00 29.94
ATOM   17169  OE1 GLN  2562      48.326   -4.865   53.356  1.00 31.90
ATOM   17170  NE2 GLN  2562      47.900   -3.204   51.898  1.00 29.29
ATOM   17171  C   GLN  2562      48.157   -0.327   54.504  1.00 24.50
ATOM   17172  O   GLN  2562      48.084   -0.059   53.303  1.00 23.09
ATOM   17173  N   LEU  2563      47.658    0.468   55.448  1.00 25.26
ATOM   17174  CA  LEU  2563      46.999    1.728   55.102  1.00 24.24
ATOM   17175  CB  LEU  2563      46.331    2.353   56.333  1.00 24.36
ATOM   17176  CG  LEU  2563      45.074    1.675   56.882  1.00 26.38
ATOM   17177  CD1 LEU  2563      44.544    2.465   58.070  1.00 27.10
ATOM   17178  CD2 LEU  2563      44.018    1.599   55.797  1.00 27.72
ATOM   17179  C   LEU  2563      48.006    2.707   54.528  1.00 24.78
ATOM   17180  O   LEU  2563      47.694    3.476   53.619  1.00 22.15
ATOM   17181  N   LEU  2564      49.220    2.682   55.067  1.00 24.45
ATOM   17182  CA  LEU  2564      50.264    3.580   54.590  1.00 23.89
ATOM   17183  CB  LEU  2564      51.495    3.480   55.491  1.00 25.26
ATOM   17184  CG  LEU  2564      52.282    4.773   55.744  1.00 27.78
ATOM   17185  CD1 LEU  2564      53.598    4.405   56.410  1.00 29.55
ATOM   17186  CD2 LEU  2564      52.535    5.535   54.457  1.00 27.60
ATOM   17187  C   LEU  2564      50.638    3.173   53.169  1.00 21.75
ATOM   17188  O   LEU  2564      50.738    4.013   52.277  1.00 22.25
ATOM   17189  N   SER  2565      50.838    1.875   52.968  1.00 21.52
ATOM   17190  CA  SER  2565      51.205    1.361   51.658  1.00 23.48
ATOM   17191  CB  SER  2565      51.473   -0.142   51.745  1.00 26.47
ATOM   17192  OG  SER  2565      51.998   -0.634   50.523  1.00 34.86
ATOM   17193  C   SER  2565      50.107    1.645   50.632  1.00 22.74
ATOM   17194  O   SER  2565      50.390    1.989   49.481  1.00 21.74
ATOM   17195  N   ASP  2566      48.853    1.500   51.054  1.00 19.93
ATOM   17196  CA  ASP  2566      47.718    1.753   50.168  1.00 18.63
ATOM   17197  CB  ASP  2566      46.399    1.335   50.836  1.00 19.80
ATOM   17198  CG  ASP  2566      46.206   -0.174   50.867  1.00 21.76
ATOM   17199  OD1 ASP  2566      46.935   -0.883   50.146  1.00 24.30
```

```
ATOM   17200  OD2 ASP  2566      45.313   -0.655   51.605   1.00  20.99
ATOM   17201  C   ASP  2566      47.647    3.226   49.785   1.00  18.77
ATOM   17202  O   ASP  2566      47.329    3.560   48.650   1.00  19.96
ATOM   17203  N   ALA  2567      47.945    4.109   50.732   1.00  17.84
ATOM   17204  CA  ALA  2567      47.904    5.536   50.451   1.00  17.61
ATOM   17205  CB  ALA  2567      48.135    6.341   51.731   1.00  18.06
ATOM   17206  C   ALA  2567      48.964    5.894   49.412   1.00  16.53
ATOM   17207  O   ALA  2567      48.705    6.675   48.504   1.00  15.81
ATOM   17208  N   LEU  2568      50.162    5.338   49.560   1.00  16.61
ATOM   17209  CA  LEU  2568      51.232    5.615   48.613   1.00  18.69
ATOM   17210  CB  LEU  2568      52.563    5.047   49.127   1.00  21.36
ATOM   17211  CG  LEU  2568      53.121    5.741   50.379   1.00  22.49
ATOM   17212  CD1 LEU  2568      54.332    4.997   50.913   1.00  25.07
ATOM   17213  CD2 LEU  2568      53.484    7.182   50.031   1.00  24.13
ATOM   17214  C   LEU  2568      50.887    5.011   47.249   1.00  18.91
ATOM   17215  O   LEU  2568      51.158    5.611   46.214   1.00  20.34
ATOM   17216  N   ALA  2569      50.268    3.835   47.254   1.00  19.41
ATOM   17217  CA  ALA  2569      49.892    3.155   46.015   1.00  20.41
ATOM   17218  CB  ALA  2569      49.395    1.738   46.317   1.00  19.39
ATOM   17219  C   ALA  2569      48.820    3.929   45.257   1.00  20.57
ATOM   17220  O   ALA  2569      48.834    3.982   44.024   1.00  18.66
ATOM   17221  N   LEU  2570      47.875    4.506   45.996   1.00  21.33
ATOM   17222  CA  LEU  2570      46.810    5.295   45.385   1.00  20.35
ATOM   17223  CB  LEU  2570      45.718    5.630   46.412   1.00  20.88
ATOM   17224  CG  LEU  2570      44.822    4.476   46.878   1.00  20.36
ATOM   17225  CD1 LEU  2570      43.854    4.960   47.959   1.00  20.64
ATOM   17226  CD2 LEU  2570      44.056    3.926   45.682   1.00  21.94
ATOM   17227  C   LEU  2570      47.401    6.582   44.824   1.00  20.57
ATOM   17228  O   LEU  2570      46.999    7.049   43.754   1.00  16.60
ATOM   17229  N   GLU  2571      48.356    7.163   45.547   1.00  19.59
ATOM   17230  CA  GLU  2571      48.990    8.389   45.076   1.00  20.08
ATOM   17231  CB  GLU  2571      49.965    8.937   46.127   1.00  19.80
ATOM   17232  CG  GLU  2571      50.705   10.184   45.662   1.00  22.18
ATOM   17233  CD  GLU  2571      51.688   10.684   46.706   1.00  22.20
ATOM   17234  OE1 GLU  2571      52.470    9.854   47.213   1.00  23.24
ATOM   17235  OE2 GLU  2571      51.677   11.891   47.003   1.00  21.21
ATOM   17236  C   GLU  2571      49.748    8.124   43.779   1.00  19.41
ATOM   17237  O   GLU  2571      49.658    8.904   42.833   1.00  20.18
ATOM   17238  N   ALA  2572      50.491    7.020   43.745   1.00  20.49
ATOM   17239  CA  ALA  2572      51.266    6.660   42.564   1.00  21.39
ATOM   17240  CB  ALA  2572      52.137    5.453   42.859   1.00  23.82
ATOM   17241  C   ALA  2572      50.347    6.363   41.388   1.00  22.09
ATOM   17242  O   ALA  2572      50.718    6.555   40.228   1.00  20.31
ATOM   17243  N   ALA  2573      49.142    5.903   41.702   1.00  22.04
ATOM   17244  CA  ALA  2573      48.152    5.564   40.689   1.00  21.67
ATOM   17245  CB  ALA  2573      47.038    4.725   41.313   1.00  20.41
ATOM   17246  C   ALA  2573      47.569    6.807   40.029   1.00  20.80
ATOM   17247  O   ALA  2573      47.084    6.746   38.900   1.00  20.43
ATOM   17248  N   GLY  2574      47.615    7.934   40.733   1.00  19.07
ATOM   17249  CA  GLY  2574      47.089    9.163   40.168   1.00  17.50
ATOM   17250  C   GLY  2574      46.141    9.944   41.060   1.00  17.16
ATOM   17251  O   GLY  2574      45.716   11.041   40.701   1.00  17.95
ATOM   17252  N   ALA  2575      45.796    9.390   42.217   1.00  17.09
ATOM   17253  CA  ALA  2575      44.904   10.083   43.137   1.00  19.39
ATOM   17254  CB  ALA  2575      44.694    9.246   44.388   1.00  17.57
ATOM   17255  C   ALA  2575      45.516   11.444   43.498   1.00  20.74
ATOM   17256  O   ALA  2575      46.687   11.526   43.876   1.00  22.35
ATOM   17257  N   GLN  2576      44.731   12.510   43.375   1.00  20.06
ATOM   17258  CA  GLN  2576      45.226   13.848   43.684   1.00  21.20
ATOM   17259  CB  GLN  2576      44.733   14.836   42.628   1.00  24.45
ATOM   17260  CG  GLN  2576      45.226   14.509   41.223   1.00  29.02
ATOM   17261  CD  GLN  2576      44.551   15.337   40.149   1.00  31.24
ATOM   17262  OE1 GLN  2576      44.686   16.559   40.109   1.00  36.20
ATOM   17263  NE2 GLN  2576      43.811   14.671   39.271   1.00  32.65
ATOM   17264  C   GLN  2576      44.822   14.316   45.082   1.00  21.51
ATOM   17265  O   GLN  2576      45.260   15.371   45.549   1.00  19.45
ATOM   17266  N   LEU  2577      43.991   13.519   45.744   1.00  20.67
ATOM   17267  CA  LEU  2577      43.517   13.817   47.093   1.00  21.57
ATOM   17268  CB  LEU  2577      42.207   14.609   47.032   1.00  25.05
ATOM   17269  CG  LEU  2577      42.283   16.133   47.063   1.00  26.27
ATOM   17270  CD1 LEU  2577      40.924   16.728   46.738   1.00  27.14
ATOM   17271  CD2 LEU  2577      42.751   16.576   48.449   1.00  27.72
ATOM   17272  C   LEU  2577      43.280   12.515   47.850   1.00  21.36
ATOM   17273  O   LEU  2577      43.059   11.472   47.239   1.00  22.18
ATOM   17274  N   LEU  2578      43.327   12.571   49.178   1.00  19.22
ATOM   17275  CA  LEU  2578      43.085   11.383   49.991   1.00  19.03
ATOM   17276  CB  LEU  2578      44.403   10.691   50.389   1.00  19.80
```

```
ATOM   17277  CG   LEU  2578     44.235    9.475   51.320  1.00 20.24
ATOM   17278  CD1  LEU  2578     43.537    8.346   50.556  1.00 21.15
ATOM   17279  CD2  LEU  2578     45.587    8.989   51.840  1.00 20.62
ATOM   17280  C    LEU  2578     42.321   11.722   51.261  1.00 20.13
ATOM   17281  O    LEU  2578     42.636   12.694   51.949  1.00 20.75
ATOM   17282  N    VAL  2579     41.303   10.924   51.560  1.00 19.83
ATOM   17283  CA   VAL  2579     40.529   11.105   52.779  1.00 18.16
ATOM   17284  CB   VAL  2579     39.000   11.083   52.508  1.00 17.51
ATOM   17285  CG1  VAL  2579     38.230   10.860   53.822  1.00 16.02
ATOM   17286  CG2  VAL  2579     38.569   12.401   51.890  1.00 17.32
ATOM   17287  C    VAL  2579     40.884    9.962   53.720  1.00 19.66
ATOM   17288  O    VAL  2579     40.874    8.793   53.321  1.00 19.81
ATOM   17289  N    LEU  2580     41.232   10.316   54.956  1.00 19.69
ATOM   17290  CA   LEU  2580     41.576    9.350   55.997  1.00 20.23
ATOM   17291  CB   LEU  2580     42.912    9.684   56.656  1.00 21.71
ATOM   17292  CG   LEU  2580     44.174    9.119   56.045  1.00 24.93
ATOM   17293  CD1  LEU  2580     45.332    9.429   56.983  1.00 22.17
ATOM   17294  CD2  LEU  2580     44.027    7.607   55.848  1.00 22.55
ATOM   17295  C    LEU  2580     40.510    9.440   57.063  1.00 19.52
ATOM   17296  O    LEU  2580     40.321   10.502   57.648  1.00 20.28
ATOM   17297  N    GLU  2581     39.840    8.327   57.330  1.00 19.37
ATOM   17298  CA   GLU  2581     38.759    8.310   58.308  1.00 19.88
ATOM   17299  CB   GLU  2581     37.452    7.906   57.611  1.00 20.26
ATOM   17300  CG   GLU  2581     36.289    7.660   58.564  1.00 22.54
ATOM   17301  CD   GLU  2581     34.945    7.737   57.869  1.00 24.53
ATOM   17302  OE1  GLU  2581     34.920    7.787   56.622  1.00 21.82
ATOM   17303  OE2  GLU  2581     33.912    7.748   58.572  1.00 26.36
ATOM   17304  C    GLU  2581     38.974    7.416   59.519  1.00 17.68
ATOM   17305  O    GLU  2581     39.317    6.247   59.388  1.00 18.36
ATOM   17306  N    CYS  2582     38.779    7.988   60.701  1.00 19.70
ATOM   17307  CA   CYS  2582     38.896    7.263   61.955  1.00 19.88
ATOM   17308  CB   CYS  2582     37.605    6.489   62.218  1.00 21.29
ATOM   17309  SG   CYS  2582     36.197    7.601   62.460  1.00 24.19
ATOM   17310  C    CYS  2582     40.091    6.340   62.067  1.00 19.95
ATOM   17311  O    CYS  2582     39.963    5.118   62.120  1.00 21.49
ATOM   17312  N    VAL  2583     41.261    6.954   62.127  1.00 21.05
ATOM   17313  CA   VAL  2583     42.506    6.226   62.241  1.00 23.03
ATOM   17314  CB   VAL  2583     43.317    6.351   60.924  1.00 23.48
ATOM   17315  CG1  VAL  2583     43.590    7.812   60.617  1.00 23.25
ATOM   17316  CG2  VAL  2583     44.609    5.593   61.029  1.00 25.06
ATOM   17317  C    VAL  2583     43.277    6.871   63.385  1.00 23.22
ATOM   17318  O    VAL  2583     43.094    8.053   63.675  1.00 22.61
ATOM   17319  N    PRO  2584     44.132    6.099   64.067  1.00 24.47
ATOM   17320  CD   PRO  2584     44.412    4.662   63.956  1.00 23.45
ATOM   17321  CA   PRO  2584     44.891    6.701   65.163  1.00 24.14
ATOM   17322  CB   PRO  2584     45.745    5.538   65.680  1.00 25.70
ATOM   17323  CG   PRO  2584     45.792    4.581   64.518  1.00 28.17
ATOM   17324  C    PRO  2584     45.708    7.873   64.635  1.00 24.60
ATOM   17325  O    PRO  2584     46.285    7.804   63.545  1.00 23.19
ATOM   17326  N    VAL  2585     45.727    8.958   65.400  1.00 23.51
ATOM   17327  CA   VAL  2585     46.444   10.172   65.025  1.00 23.75
ATOM   17328  CB   VAL  2585     46.511   11.158   66.214  1.00 24.99
ATOM   17329  CG1  VAL  2585     47.098   12.491   65.758  1.00 23.50
ATOM   17330  CG2  VAL  2585     45.124   11.363   66.790  1.00 25.53
ATOM   17331  C    VAL  2585     47.865    9.895   64.549  1.00 25.46
ATOM   17332  O    VAL  2585     48.317   10.477   63.563  1.00 24.79
ATOM   17333  N    GLU  2586     48.563    9.002   65.245  1.00 26.45
ATOM   17334  CA   GLU  2586     49.939    8.683   64.879  1.00 28.54
ATOM   17335  CB   GLU  2586     50.559    7.688   65.873  1.00 30.14
ATOM   17336  CG   GLU  2586     49.580    6.852   66.695  1.00 35.51
ATOM   17337  CD   GLU  2586     48.843    7.665   67.757  1.00 37.22
ATOM   17338  OE1  GLU  2586     49.464    8.566   68.363  1.00 38.20
ATOM   17339  OE2  GLU  2586     47.649    7.388   67.992  1.00 39.25
ATOM   17340  C    GLU  2586     50.064    8.150   63.456  1.00 28.46
ATOM   17341  O    GLU  2586     51.045    8.425   62.769  1.00 27.67
ATOM   17342  N    LEU  2587     49.065    7.394   63.017  1.00 27.65
ATOM   17343  CA   LEU  2587     49.077    6.834   61.674  1.00 26.73
ATOM   17344  CB   LEU  2587     48.026    5.731   61.554  1.00 28.21
ATOM   17345  CG   LEU  2587     48.378    4.497   60.721  1.00 30.72
ATOM   17346  CD1  LEU  2587     47.099    3.720   60.454  1.00 29.14
ATOM   17347  CD2  LEU  2587     49.043    4.886   59.409  1.00 30.86
ATOM   17348  C    LEU  2587     48.785    7.937   60.654  1.00 26.34
ATOM   17349  O    LEU  2587     49.398    7.987   59.583  1.00 24.48
ATOM   17350  N    ALA  2588     47.848    8.820   60.994  1.00 24.00
ATOM   17351  CA   ALA  2588     47.484    9.922   60.111  1.00 23.70
ATOM   17352  CB   ALA  2588     46.331   10.737   60.712  1.00 23.08
ATOM   17353  C    ALA  2588     48.691   10.815   59.887  1.00 24.14
```

```
ATOM   17354  O    ALA  2588     48.839  11.415  58.822  1.00 22.54
ATOM   17355  N    LYS  2589     49.548  10.904  60.901  1.00 24.22
ATOM   17356  CA   LYS  2589     50.760  11.709  60.816  1.00 25.74
ATOM   17357  CB   LYS  2589     51.471  11.751  62.172  1.00 27.20
ATOM   17358  CG   LYS  2589     50.586  12.130  63.345  1.00 32.13
ATOM   17359  CD   LYS  2589     51.399  12.323  64.625  1.00 36.29
ATOM   17360  CE   LYS  2589     50.510  12.760  65.784  1.00 35.55
ATOM   17361  NZ   LYS  2589     51.296  13.309  66.917  1.00 39.50
ATOM   17362  C    LYS  2589     51.694  11.086  59.781  1.00 23.37
ATOM   17363  O    LYS  2589     52.171  11.768  58.881  1.00 26.48
ATOM   17364  N    ARG  2590     51.934   9.785  59.915  1.00 23.58
ATOM   17365  CA   ARG  2590     52.813   9.062  59.005  1.00 22.93
ATOM   17366  CB   ARG  2590     52.882   7.575  59.374  1.00 25.56
ATOM   17367  CG   ARG  2590     52.959   7.280  60.863  1.00 27.56
ATOM   17368  CD   ARG  2590     53.951   6.177  61.187  1.00 28.90
ATOM   17369  NE   ARG  2590     53.876   4.999  60.319  1.00 28.63
ATOM   17370  CZ   ARG  2590     53.110   3.933  60.536  1.00 30.48
ATOM   17371  NH1  ARG  2590     52.322   3.872  61.601  1.00 30.99
ATOM   17372  NH2  ARG  2590     53.159   2.903  59.701  1.00 30.22
ATOM   17373  C    ARG  2590     52.346   9.183  57.556  1.00 22.50
ATOM   17374  O    ARG  2590     53.152   9.366  56.641  1.00 21.17
ATOM   17375  N    ILE  2591     51.040   9.073  57.342  1.00 20.92
ATOM   17376  CA   ILE  2591     50.493   9.150  55.993  1.00 19.61
ATOM   17377  CB   ILE  2591     49.023   8.673  55.980  1.00 20.34
ATOM   17378  CG2  ILE  2591     48.418   8.871  54.600  1.00 21.46
ATOM   17379  CG1  ILE  2591     48.971   7.206  56.395  1.00 20.56
ATOM   17380  CD1  ILE  2591     47.585   6.658  56.588  1.00 25.52
ATOM   17381  C    ILE  2591     50.591  10.552  55.410  1.00 20.03
ATOM   17382  O    ILE  2591     51.005  10.732  54.261  1.00 19.07
ATOM   17383  N    THR  2592     50.225  11.549  56.207  1.00 20.25
ATOM   17384  CA   THR  2592     50.276  12.928  55.749  1.00 22.08
ATOM   17385  CB   THR  2592     49.743  13.894  56.826  1.00 21.69
ATOM   17386  OG1  THR  2592     48.358  13.615  57.070  1.00 22.71
ATOM   17387  CG2  THR  2592     49.889  15.343  56.368  1.00 22.53
ATOM   17388  C    THR  2592     51.693  13.346  55.376  1.00 23.76
ATOM   17389  O    THR  2592     51.896  14.092  54.417  1.00 24.12
ATOM   17390  N    GLU  2593     52.676  12.871  56.129  1.00 25.91
ATOM   17391  CA   GLU  2593     54.059  13.227  55.834  1.00 27.67
ATOM   17392  CB   GLU  2593     54.936  13.023  57.071  1.00 29.33
ATOM   17393  CG   GLU  2593     54.427  13.761  58.299  1.00 33.19
ATOM   17394  CD   GLU  2593     55.367  13.650  59.486  1.00 36.93
ATOM   17395  OE1  GLU  2593     55.815  12.520  59.792  1.00 38.76
ATOM   17396  OE2  GLU  2593     55.649  14.689  60.121  1.00 38.10
ATOM   17397  C    GLU  2593     54.600  12.407  54.664  1.00 26.14
ATOM   17398  O    GLU  2593     55.381  12.911  53.855  1.00 26.29
ATOM   17399  N    ALA  2594     54.172  11.153  54.565  1.00 24.55
ATOM   17400  CA   ALA  2594     54.626  10.281  53.489  1.00 24.61
ATOM   17401  CB   ALA  2594     54.252   8.833  53.801  1.00 24.77
ATOM   17402  C    ALA  2594     54.088  10.679  52.115  1.00 24.72
ATOM   17403  O    ALA  2594     54.781  10.519  51.106  1.00 24.92
ATOM   17404  N    LEU  2595     52.862  11.198  52.069  1.00 23.86
ATOM   17405  CA   LEU  2595     52.259  11.602  50.796  1.00 23.39
ATOM   17406  CB   LEU  2595     50.739  11.377  50.818  1.00 23.16
ATOM   17407  CG   LEU  2595     50.211   9.935  50.851  1.00 25.00
ATOM   17408  CD1  LEU  2595     48.681   9.954  50.756  1.00 24.60
ATOM   17409  CD2  LEU  2595     50.781   9.145  49.698  1.00 27.49
ATOM   17410  C    LEU  2595     52.526  13.050  50.410  1.00 22.38
ATOM   17411  O    LEU  2595     52.590  13.934  51.260  1.00 22.82
ATOM   17412  N    ALA  2596     52.673  13.280  49.112  1.00 21.91
ATOM   17413  CA   ALA  2596     52.907  14.618  48.580  1.00 20.98
ATOM   17414  CB   ALA  2596     53.676  14.532  47.259  1.00 21.84
ATOM   17415  C    ALA  2596     51.551  15.284  48.358  1.00 21.83
ATOM   17416  O    ALA  2596     51.402  16.500  48.522  1.00 19.07
ATOM   17417  N    ILE  2597     50.563  14.477  47.972  1.00 22.36
ATOM   17418  CA   ILE  2597     49.206  14.975  47.744  1.00 22.38
ATOM   17419  CB   ILE  2597     48.329  13.917  47.038  1.00 20.84
ATOM   17420  CG2  ILE  2597     48.874  13.629  45.652  1.00 21.38
ATOM   17421  CG1  ILE  2597     48.274  12.642  47.887  1.00 20.61
ATOM   17422  CD1  ILE  2597     47.252  11.612  47.410  1.00 22.88
ATOM   17423  C    ILE  2597     48.556  15.315  49.084  1.00 23.26
ATOM   17424  O    ILE  2597     48.889  14.724  50.109  1.00 24.06
ATOM   17425  N    PRO  2598     47.618  16.276  49.091  1.00 24.26
ATOM   17426  CD   PRO  2598     47.190  17.134  47.973  1.00 24.78
ATOM   17427  CA   PRO  2598     46.951  16.657  50.339  1.00 24.43
ATOM   17428  CB   PRO  2598     46.158  17.908  49.946  1.00 24.29
ATOM   17429  CG   PRO  2598     45.908  17.716  48.487  1.00 27.18
ATOM   17430  C    PRO  2598     46.079  15.553  50.935  1.00 23.63
```

```
ATOM   17431  O    PRO  2598    45.401  14.813  50.218  1.00 23.16
ATOM   17432  N    VAL  2599    46.126  15.440  52.257  1.00 22.78
ATOM   17433  CA   VAL  2599    45.360  14.441  52.984  1.00 22.33
ATOM   17434  CB   VAL  2599    46.286  13.580  53.873  1.00 22.48
ATOM   17435  CG1  VAL  2599    45.475  12.535  54.623  1.00 22.67
ATOM   17436  CG2  VAL  2599    47.350  12.915  53.013  1.00 22.46
ATOM   17437  C    VAL  2599    44.311  15.133  53.857  1.00 23.71
ATOM   17438  O    VAL  2599    44.638  15.979  54.692  1.00 22.13
ATOM   17439  N    ILE  2600    43.048  14.779  53.642  1.00 21.85
ATOM   17440  CA   ILE  2600    41.944  15.360  54.397  1.00 20.33
ATOM   17441  CB   ILE  2600    40.774  15.719  53.459  1.00 19.87
ATOM   17442  CG2  ILE  2600    39.599  16.283  54.269  1.00 20.69
ATOM   17443  CG1  ILE  2600    41.265  16.720  52.409  1.00 22.41
ATOM   17444  CD1  ILE  2600    40.294  16.981  51.262  1.00 23.07
ATOM   17445  C    ILE  2600    41.492  14.343  55.429  1.00 19.49
ATOM   17446  O    ILE  2600    41.199  13.199  55.094  1.00 18.22
ATOM   17447  N    GLY  2601    41.442  14.754  56.690  1.00 19.36
ATOM   17448  CA   GLY  2601    41.053  13.813  57.715  1.00 18.13
ATOM   17449  C    GLY  2601    39.700  14.052  58.342  1.00 18.77
ATOM   17450  O    GLY  2601    39.154  15.155  58.303  1.00 18.02
ATOM   17451  N    ILE  2602    39.155  12.976  58.892  1.00 18.53
ATOM   17452  CA   ILE  2602    37.892  12.998  59.600  1.00 19.83
ATOM   17453  CB   ILE  2602    36.684  12.679  58.671  1.00 21.77
ATOM   17454  CG2  ILE  2602    36.964  11.449  57.822  1.00 21.95
ATOM   17455  CG1  ILE  2602    35.424  12.479  59.518  1.00 24.57
ATOM   17456  CD1  ILE  2602    35.090  13.650  60.403  1.00 27.84
ATOM   17457  C    ILE  2602    38.059  11.919  60.658  1.00 19.03
ATOM   17458  O    ILE  2602    38.075  10.724  60.354  1.00 20.33
ATOM   17459  N    GLY  2603    38.217  12.352  61.901  1.00 16.91
ATOM   17460  CA   GLY  2603    38.431  11.411  62.980  1.00 18.24
ATOM   17461  C    GLY  2603    39.864  10.914  62.930  1.00 18.71
ATOM   17462  O    GLY  2603    40.169   9.825  63.410  1.00 19.69
ATOM   17463  N    ALA  2604    40.743  11.717  62.335  1.00 20.83
ATOM   17464  CA   ALA  2604    42.160  11.363  62.210  1.00 22.46
ATOM   17465  CB   ALA  2604    42.534  11.229  60.735  1.00 21.76
ATOM   17466  C    ALA  2604    43.076  12.382  62.885  1.00 23.51
ATOM   17467  O    ALA  2604    44.292  12.370  62.671  1.00 23.26
ATOM   17468  N    GLY  2605    42.492  13.268  63.689  1.00 22.78
ATOM   17469  CA   GLY  2605    43.285  14.273  64.381  1.00 24.37
ATOM   17470  C    GLY  2605    43.540  15.523  63.560  1.00 23.63
ATOM   17471  O    GLY  2605    43.042  15.650  62.444  1.00 23.74
ATOM   17472  N    ASN  2606    44.322  16.453  64.102  1.00 22.37
ATOM   17473  CA   ASN  2606    44.610  17.696  63.391  1.00 22.84
ATOM   17474  CB   ASN  2606    44.614  18.884  64.368  1.00 24.03
ATOM   17475  CG   ASN  2606    45.751  18.816  65.384  1.00 27.25
ATOM   17476  OD1  ASN  2606    45.935  19.737  66.182  1.00 30.24
ATOM   17477  ND2  ASN  2606    46.513  17.729  65.360  1.00 21.63
ATOM   17478  C    ASN  2606    45.935  17.649  62.644  1.00 22.00
ATOM   17479  O    ASN  2606    46.428  18.680  62.185  1.00 22.27
ATOM   17480  N    VAL  2607    46.491  16.450  62.501  1.00 21.97
ATOM   17481  CA   VAL  2607    47.782  16.264  61.835  1.00 23.06
ATOM   17482  CB   VAL  2607    48.473  14.975  62.343  1.00 25.16
ATOM   17483  CG1  VAL  2607    49.896  14.903  61.813  1.00 30.68
ATOM   17484  CG2  VAL  2607    48.478  14.951  63.863  1.00 28.00
ATOM   17485  C    VAL  2607    47.698  16.210  60.308  1.00 22.15
ATOM   17486  O    VAL  2607    48.708  16.350  59.614  1.00 19.36
ATOM   17487  N    THR  2608    46.489  16.010  59.791  1.00 20.18
ATOM   17488  CA   THR  2608    46.273  15.945  58.354  1.00 18.55
ATOM   17489  CB   THR  2608    44.931  15.247  58.040  1.00 17.48
ATOM   17490  OG1  THR  2608    43.864  15.942  58.698  1.00 17.94
ATOM   17491  CG2  THR  2608    44.958  13.815  58.538  1.00 16.25
ATOM   17492  C    THR  2608    46.288  17.340  57.736  1.00 18.46
ATOM   17493  O    THR  2608    46.208  18.344  58.444  1.00 18.52
ATOM   17494  N    ASP  2609    46.392  17.392  56.414  1.00 18.90
ATOM   17495  CA   ASP  2609    46.438  18.653  55.685  1.00 19.61
ATOM   17496  CB   ASP  2609    46.858  18.384  54.238  1.00 20.80
ATOM   17497  CG   ASP  2609    48.209  17.698  54.143  1.00 22.85
ATOM   17498  OD1  ASP  2609    49.214  18.315  54.550  1.00 25.80
ATOM   17499  OD2  ASP  2609    48.269  16.544  53.662  1.00 25.46
ATOM   17500  C    ASP  2609    45.101  19.380  55.711  1.00 19.79
ATOM   17501  O    ASP  2609    45.051  20.607  55.693  1.00 18.76
ATOM   17502  N    GLY  2610    44.014  18.620  55.754  1.00 19.79
ATOM   17503  CA   GLY  2610    42.703  19.239  55.771  1.00 17.70
ATOM   17504  C    GLY  2610    41.726  18.492  56.646  1.00 14.64
ATOM   17505  O    GLY  2610    42.051  17.457  57.224  1.00 17.46
ATOM   17506  N    GLN  2611    40.516  19.024  56.752  1.00 17.50
ATOM   17507  CA   GLN  2611    39.482  18.398  57.559  1.00 17.89
```

```
ATOM   17508  CB  GLN  2611      39.268  19.190  58.853  1.00 19.92
ATOM   17509  CG  GLN  2611      40.465  19.210  59.799  1.00 20.42
ATOM   17510  CD  GLN  2611      40.848  17.829  60.291  1.00 22.00
ATOM   17511  OE1 GLN  2611      39.984  17.015  60.627  1.00 24.29
ATOM   17512  NE2 GLN  2611      42.148  17.561  60.354  1.00 19.83
ATOM   17513  C   GLN  2611      38.164  18.341  56.800  1.00 17.01
ATOM   17514  O   GLN  2611      37.911  19.151  55.905  1.00 17.06
ATOM   17515  N   ILE  2612      37.327  17.379  57.168  1.00 20.01
ATOM   17516  CA  ILE  2612      36.013  17.239  56.557  1.00 21.18
ATOM   17517  CB  ILE  2612      36.047  16.279  55.336  1.00 21.95
ATOM   17518  CG2 ILE  2612      36.253  14.835  55.791  1.00 17.51
ATOM   17519  CG1 ILE  2612      34.743  16.421  54.542  1.00 21.60
ATOM   17520  CD1 ILE  2612      34.855  15.977  53.097  1.00 22.16
ATOM   17521  C   ILE  2612      35.043  16.724  57.611  1.00 23.20
ATOM   17522  O   ILE  2612      35.435  16.034  58.559  1.00 23.34
ATOM   17523  N   LEU  2613      33.774  17.072  57.458  1.00 25.17
ATOM   17524  CA  LEU  2613      32.774  16.644  58.416  1.00 27.65
ATOM   17525  CB  LEU  2613      32.932  17.476  59.686  1.00 31.09
ATOM   17526  CG  LEU  2613      32.465  16.923  61.030  1.00 34.00
ATOM   17527  CD1 LEU  2613      32.834  17.930  62.111  1.00 34.54
ATOM   17528  CD2 LEU  2613      30.962  16.673  61.020  1.00 35.29
ATOM   17529  C   LEU  2613      31.382  16.842  57.821  1.00 27.54
ATOM   17530  O   LEU  2613      31.168  17.767  57.044  1.00 26.77
ATOM   17531  N   VAL  2614      30.450  15.961  58.173  1.00 27.38
ATOM   17532  CA  VAL  2614      29.087  16.073  57.678  1.00 27.05
ATOM   17533  CB  VAL  2614      28.210  14.890  58.141  1.00 28.19
ATOM   17534  CG1 VAL  2614      26.793  15.037  57.597  1.00 28.81
ATOM   17535  CG2 VAL  2614      28.825  13.577  57.671  1.00 28.09
ATOM   17536  C   VAL  2614      28.523  17.375  58.238  1.00 25.84
ATOM   17537  O   VAL  2614      28.502  17.590  59.449  1.00 26.11
ATOM   17538  N   MET  2615      28.085  18.251  57.344  1.00 24.55
ATOM   17539  CA  MET  2615      27.541  19.532  57.753  1.00 22.58
ATOM   17540  CB  MET  2615      26.987  20.274  56.546  1.00 20.69
ATOM   17541  CG  MET  2615      25.813  19.564  55.890  1.00 18.65
ATOM   17542  SD  MET  2615      24.658  20.775  55.265  1.00 19.02
ATOM   17543  CE  MET  2615      23.584  20.962  56.690  1.00 18.27
ATOM   17544  C   MET  2615      26.440  19.393  58.806  1.00 22.84
ATOM   17545  O   MET  2615      26.255  20.281  59.632  1.00 22.93
ATOM   17546  N   HIS  2616      25.701  18.288  58.776  1.00 21.47
ATOM   17547  CA  HIS  2616      24.627  18.100  59.737  1.00 21.54
ATOM   17548  CB  HIS  2616      23.741  16.930  59.314  1.00 21.41
ATOM   17549  CG  HIS  2616      23.013  17.181  58.030  1.00 18.70
ATOM   17550  CD2 HIS  2616      23.417  17.071  56.743  1.00 16.47
ATOM   17551  ND1 HIS  2616      21.736  17.697  57.987  1.00 20.75
ATOM   17552  CE1 HIS  2616      21.385  17.895  56.729  1.00 18.61
ATOM   17553  NE2 HIS  2616      22.388  17.524  55.955  1.00 20.61
ATOM   17554  C   HIS  2616      25.122  17.916  61.161  1.00 23.40
ATOM   17555  O   HIS  2616      24.420  18.266  62.113  1.00 21.84
ATOM   17556  N   ASP  2617      26.328  17.379  61.322  1.00 24.60
ATOM   17557  CA  ASP  2617      26.880  17.188  62.664  1.00 28.05
ATOM   17558  CB  ASP  2617      27.918  16.060  62.677  1.00 29.84
ATOM   17559  CG  ASP  2617      27.311  14.703  62.396  1.00 32.71
ATOM   17560  OD1 ASP  2617      26.339  14.322  63.088  1.00 30.70
ATOM   17561  OD2 ASP  2617      27.818  14.012  61.487  1.00 34.71
ATOM   17562  C   ASP  2617      27.535  18.473  63.153  1.00 28.63
ATOM   17563  O   ASP  2617      27.681  18.679  64.356  1.00 30.14
ATOM   17564  N   ALA  2618      27.928  19.333  62.217  1.00 29.76
ATOM   17565  CA  ALA  2618      28.577  20.593  62.561  1.00 31.50
ATOM   17566  CB  ALA  2618      29.311  21.152  61.339  1.00 30.82
ATOM   17567  C   ALA  2618      27.606  21.635  63.116  1.00 32.49
ATOM   17568  O   ALA  2618      28.029  22.630  63.707  1.00 33.61
ATOM   17569  N   PHE  2619      26.308  21.411  62.931  1.00 33.51
ATOM   17570  CA  PHE  2619      25.311  22.350  63.436  1.00 33.26
ATOM   17571  CB  PHE  2619      24.524  22.962  62.280  1.00 35.56
ATOM   17572  CG  PHE  2619      25.394  23.485  61.174  1.00 37.64
ATOM   17573  CD1 PHE  2619      26.457  24.336  61.452  1.00 39.02
ATOM   17574  CD2 PHE  2619      25.156  23.119  59.852  1.00 38.68
ATOM   17575  CE1 PHE  2619      27.277  24.814  60.432  1.00 39.78
ATOM   17576  CE2 PHE  2619      25.969  23.591  58.821  1.00 39.59
ATOM   17577  CZ  PHE  2619      27.030  24.439  59.114  1.00 40.73
ATOM   17578  C   PHE  2619      24.359  21.694  64.423  1.00 32.67
ATOM   17579  O   PHE  2619      23.247  22.173  64.642  1.00 33.99
ATOM   17580  N   GLY  2620      24.806  20.596  65.023  1.00 33.38
ATOM   17581  CA  GLY  2620      23.989  19.889  65.996  1.00 32.34
ATOM   17582  C   GLY  2620      22.618  19.483  65.490  1.00 32.02
ATOM   17583  O   GLY  2620      21.715  19.214  66.283  1.00 32.91
ATOM   17584  N   ILE  2621      22.454  19.435  64.172  1.00 30.10
```

```
ATOM  17585  CA   ILE  2621     21.176  19.046  63.589  1.00 29.00
ATOM  17586  CB   ILE  2621     21.170  19.248  62.057  1.00 26.35
ATOM  17587  CG2  ILE  2621     19.867  18.713  61.464  1.00 25.62
ATOM  17588  CG1  ILE  2621     21.332  20.730  61.729  1.00 24.08
ATOM  17589  CD1  ILE  2621     21.695  21.009  60.295  1.00 24.54
ATOM  17590  C    ILE  2621     20.900  17.581  63.895  1.00 30.31
ATOM  17591  O    ILE  2621     19.780  17.209  64.224  1.00 29.60
ATOM  17592  N    THR  2622     21.936  16.756  63.799  1.00 32.59
ATOM  17593  CA   THR  2622     21.794  15.329  64.053  1.00 35.67
ATOM  17594  CB   THR  2622     23.035  14.556  63.560  1.00 35.42
ATOM  17595  OG1  THR  2622     24.141  14.813  64.434  1.00 36.19
ATOM  17596  CG2  THR  2622     23.407  15.005  62.158  1.00 31.84
ATOM  17597  C    THR  2622     21.581  15.037  65.535  1.00 38.18
ATOM  17598  O    THR  2622     22.311  15.549  66.383  1.00 38.40
ATOM  17599  N    GLY  2623     20.571  14.220  65.827  1.00 41.10
ATOM  17600  CA   GLY  2623     20.252  13.844  67.194  1.00 46.07
ATOM  17601  C    GLY  2623     20.921  14.664  68.279  1.00 49.46
ATOM  17602  O    GLY  2623     20.755  15.884  68.342  1.00 50.21
ATOM  17603  N    GLY  2624     21.685  13.992  69.135  1.00 51.80
ATOM  17604  CA   GLY  2624     22.370  14.681  70.213  1.00 53.86
ATOM  17605  C    GLY  2624     23.726  14.086  70.538  1.00 55.07
ATOM  17606  O    GLY  2624     24.670  14.811  70.856  1.00 56.17
ATOM  17607  N    HIS  2625     23.829  12.763  70.461  1.00 55.75
ATOM  17608  CA   HIS  2625     25.088  12.087  70.754  1.00 56.39
ATOM  17609  CB   HIS  2625     24.817  10.702  71.352  1.00 58.60
ATOM  17610  CG   HIS  2625     24.122  10.744  72.678  1.00 61.61
ATOM  17611  CD2  HIS  2625     22.939  10.223  73.083  1.00 62.23
ATOM  17612  ND1  HIS  2625     24.651  11.389  73.776  1.00 62.65
ATOM  17613  CE1  HIS  2625     23.825  11.264  74.799  1.00 62.69
ATOM  17614  NE2  HIS  2625     22.778  10.561  74.406  1.00 63.05
ATOM  17615  C    HIS  2625     25.957  11.959  69.504  1.00 55.11
ATOM  17616  O    HIS  2625     26.250  10.852  69.053  1.00 55.29
ATOM  17617  N    ILE  2626     26.368  13.099  68.953  1.00 53.22
ATOM  17618  CA   ILE  2626     27.207  13.123  67.756  1.00 50.84
ATOM  17619  CB   ILE  2626     27.596  14.566  67.365  1.00 51.18
ATOM  17620  CG2  ILE  2626     26.352  15.369  67.024  1.00 52.29
ATOM  17621  CG1  ILE  2626     28.377  15.218  68.508  1.00 50.93
ATOM  17622  CD1  ILE  2626     29.050  16.524  68.131  1.00 51.04
ATOM  17623  C    ILE  2626     28.494  12.335  67.984  1.00 47.86
ATOM  17624  O    ILE  2626     28.875  12.067  69.122  1.00 47.90
ATOM  17625  N    PRO  2627     29.189  11.963  66.899  1.00 45.93
ATOM  17626  CD   PRO  2627     28.901  12.266  65.485  1.00 45.13
ATOM  17627  CA   PRO  2627     30.436  11.203  67.026  1.00 43.64
ATOM  17628  CB   PRO  2627     30.801  10.904  65.574  1.00 43.90
ATOM  17629  CG   PRO  2627     30.254  12.089  64.843  1.00 45.31
ATOM  17630  C    PRO  2627     31.533  11.973  67.762  1.00 41.87
ATOM  17631  O    PRO  2627     31.599  13.198  67.687  1.00 41.53
ATOM  17632  N    LYS  2628     32.390  11.243  68.472  1.00 40.14
ATOM  17633  CA   LYS  2628     33.486  11.846  69.224  1.00 39.09
ATOM  17634  CB   LYS  2628     34.362  10.759  69.864  1.00 41.61
ATOM  17635  CG   LYS  2628     34.081  10.500  71.340  1.00 44.14
ATOM  17636  CD   LYS  2628     32.661   9.998  71.567  1.00 46.92
ATOM  17637  CE   LYS  2628     32.359   9.839  73.051  1.00 47.79
ATOM  17638  NZ   LYS  2628     30.956   9.403  73.304  1.00 49.12
ATOM  17639  C    LYS  2628     34.372  12.748  68.376  1.00 36.45
ATOM  17640  O    LYS  2628     34.905  13.743  68.865  1.00 36.12
ATOM  17641  N    PHE  2629     34.531  12.405  67.103  1.00 32.52
ATOM  17642  CA   PHE  2629     35.387  13.189  66.224  1.00 29.15
ATOM  17643  CB   PHE  2629     35.876  12.319  65.057  1.00 29.64
ATOM  17644  CG   PHE  2629     34.772  11.753  64.216  1.00 29.08
ATOM  17645  CD1  PHE  2629     34.068  12.561  63.328  1.00 29.61
ATOM  17646  CD2  PHE  2629     34.431  10.411  64.318  1.00 30.24
ATOM  17647  CE1  PHE  2629     33.035  12.036  62.550  1.00 32.08
ATOM  17648  CE2  PHE  2629     33.403   9.873  63.550  1.00 32.17
ATOM  17649  CZ   PHE  2629     32.702  10.688  62.661  1.00 31.61
ATOM  17650  C    PHE  2629     34.742  14.458  65.692  1.00 26.59
ATOM  17651  O    PHE  2629     35.426  15.316  65.135  1.00 24.60
ATOM  17652  N    ALA  2630     33.432  14.587  65.869  1.00 24.68
ATOM  17653  CA   ALA  2630     32.720  15.764  65.388  1.00 24.35
ATOM  17654  CB   ALA  2630     31.342  15.359  64.856  1.00 24.75
ATOM  17655  C    ALA  2630     32.559  16.822  66.473  1.00 23.16
ATOM  17656  O    ALA  2630     32.719  16.539  67.659  1.00 23.58
ATOM  17657  N    LYS  2631     32.252  18.043  66.046  1.00 23.38
ATOM  17658  CA   LYS  2631     32.039  19.164  66.955  1.00 23.65
ATOM  17659  CB   LYS  2631     33.319  19.993  67.105  1.00 23.84
ATOM  17660  CG   LYS  2631     33.127  21.250  67.947  1.00 25.08
ATOM  17661  CD   LYS  2631     34.435  21.990  68.159  1.00 25.96
```

```
ATOM  17662  CE   LYS  2631    34.227  23.261  68.968  1.00 28.22
ATOM  17663  NZ   LYS  2631    35.499  24.020  69.116  1.00 29.85
ATOM  17664  C    LYS  2631    30.921  20.068  66.444  1.00 22.92
ATOM  17665  O    LYS  2631    30.885  20.422  65.263  1.00 21.69
ATOM  17666  N    ASN  2632    30.015  20.436  67.345  1.00 23.42
ATOM  17667  CA   ASN  2632    28.889  21.310  67.026  1.00 22.87
ATOM  17668  CB   ASN  2632    27.771  21.121  68.058  1.00 22.06
ATOM  17669  CG   ASN  2632    26.566  22.005  67.792  1.00 22.77
ATOM  17670  OD1  ASN  2632    26.626  22.943  66.994  1.00 23.52
ATOM  17671  ND2  ASN  2632    25.463  21.716  68.475  1.00 20.23
ATOM  17672  C    ASN  2632    29.384  22.748  67.080  1.00 22.32
ATOM  17673  O    ASN  2632    29.559  23.306  68.167  1.00 22.04
ATOM  17674  N    PHE  2633    29.617  23.348  65.918  1.00 20.88
ATOM  17675  CA   PHE  2633    30.103  24.724  65.871  1.00 22.92
ATOM  17676  CB   PHE  2633    30.879  24.987  64.576  1.00 23.76
ATOM  17677  CG   PHE  2633    32.182  24.245  64.492  1.00 25.62
ATOM  17678  CD1  PHE  2633    32.224  22.938  64.020  1.00 25.78
ATOM  17679  CD2  PHE  2633    33.363  24.837  64.933  1.00 25.99
ATOM  17680  CE1  PHE  2633    33.421  22.229  63.988  1.00 25.39
ATOM  17681  CE2  PHE  2633    34.565  24.138  64.908  1.00 24.67
ATOM  17682  CZ   PHE  2633    34.593  22.831  64.435  1.00 27.61
ATOM  17683  C    PHE  2633    29.002  25.762  66.021  1.00 23.51
ATOM  17684  O    PHE  2633    29.287  26.940  66.230  1.00 22.07
ATOM  17685  N    LEU  2634    27.748  25.329  65.917  1.00 23.90
ATOM  17686  CA   LEU  2634    26.625  26.246  66.056  1.00 25.40
ATOM  17687  CB   LEU  2634    25.351  25.628  65.485  1.00 23.46
ATOM  17688  CG   LEU  2634    24.073  26.438  65.713  1.00 19.60
ATOM  17689  CD1  LEU  2634    24.167  27.786  65.009  1.00 19.80
ATOM  17690  CD2  LEU  2634    22.876  25.651  65.185  1.00 17.49
ATOM  17691  C    LEU  2634    26.397  26.597  67.521  1.00 28.16
ATOM  17692  O    LEU  2634    26.108  27.748  67.853  1.00 27.99
ATOM  17693  N    ALA  2635    26.516  25.592  68.384  1.00 30.92
ATOM  17694  CA   ALA  2635    26.326  25.760  69.820  1.00 36.08
ATOM  17695  CB   ALA  2635    26.545  24.434  70.529  1.00 35.24
ATOM  17696  C    ALA  2635    27.297  26.801  70.356  1.00 40.21
ATOM  17697  O    ALA  2635    26.965  27.569  71.260  1.00 41.94
ATOM  17698  N    GLU  2636    28.498  26.812  69.786  1.00 43.52
ATOM  17699  CA   GLU  2636    29.550  27.748  70.170  1.00 47.26
ATOM  17700  CB   GLU  2636    30.885  27.313  69.550  1.00 48.66
ATOM  17701  CG   GLU  2636    31.220  25.832  69.730  1.00 52.15
ATOM  17702  CD   GLU  2636    31.594  25.471  71.158  1.00 53.80
ATOM  17703  OE1  GLU  2636    30.830  25.815  72.085  1.00 55.93
ATOM  17704  OE2  GLU  2636    32.652  24.834  71.354  1.00 54.50
ATOM  17705  C    GLU  2636    29.183  29.147  69.670  1.00 47.91
ATOM  17706  O    GLU  2636    30.017  30.052  69.645  1.00 48.49
ATOM  17707  N    THR  2637    27.927  29.306  69.263  1.00 48.71
ATOM  17708  CA   THR  2637    27.418  30.575  68.764  1.00 48.27
ATOM  17709  CB   THR  2637    28.031  30.914  67.384  1.00 48.89
ATOM  17710  OG1  THR  2637    27.518  32.171  66.927  1.00 48.26
ATOM  17711  CG2  THR  2637    27.693  29.833  66.365  1.00 49.85
ATOM  17712  C    THR  2637    25.894  30.501  68.636  1.00 47.68
ATOM  17713  O    THR  2637    25.236  29.744  69.356  1.00 48.21
ATOM  17714  N    GLY  2638    25.336  31.289  67.724  1.00 45.54
ATOM  17715  CA   GLY  2638    23.898  31.283  67.526  1.00 43.10
ATOM  17716  C    GLY  2638    23.555  31.571  66.082  1.00 40.35
ATOM  17717  O    GLY  2638    22.403  31.851  65.749  1.00 40.49
ATOM  17718  N    ASP  2639    24.567  31.487  65.224  1.00 37.74
ATOM  17719  CA   ASP  2639    24.411  31.755  63.799  1.00 35.76
ATOM  17720  CB   ASP  2639    25.025  33.116  63.469  1.00 39.24
ATOM  17721  CG   ASP  2639    24.688  33.573  62.078  1.00 41.90
ATOM  17722  OD1  ASP  2639    25.570  34.144  61.405  1.00 42.76
ATOM  17723  OD2  ASP  2639    23.526  33.367  61.662  1.00 46.27
ATOM  17724  C    ASP  2639    25.110  30.676  62.967  1.00 32.25
ATOM  17725  O    ASP  2639    26.276  30.361  63.206  1.00 30.44
ATOM  17726  N    ILE  2640    24.409  30.119  61.985  1.00 28.72
ATOM  17727  CA   ILE  2640    25.005  29.083  61.149  1.00 25.76
ATOM  17728  CB   ILE  2640    23.959  28.470  60.176  1.00 25.25
ATOM  17729  CG2  ILE  2640    24.657  27.628  59.111  1.00 23.48
ATOM  17730  CG1  ILE  2640    22.952  27.638  60.969  1.00 22.50
ATOM  17731  CD1  ILE  2640    21.751  27.150  60.161  1.00 23.27
ATOM  17732  C    ILE  2640    26.204  29.612  60.358  1.00 25.06
ATOM  17733  O    ILE  2640    27.251  28.963  60.299  1.00 25.46
ATOM  17734  N    ARG  2641    26.061  30.785  59.752  1.00 24.74
ATOM  17735  CA   ARG  2641    27.169  31.356  58.993  1.00 23.19
ATOM  17736  CB   ARG  2641    26.739  32.642  58.285  1.00 22.91
ATOM  17737  CG   ARG  2641    25.858  32.392  57.077  1.00 25.25
ATOM  17738  CD   ARG  2641    25.407  33.687  56.433  1.00 24.40
```

```
ATOM   17739   NE    ARG   2641      24.650   33.441   55.210   1.00  27.34
ATOM   17740   CZ    ARG   2641      23.453   32.863   55.166   1.00  26.81
ATOM   17741   NH1   ARG   2641      22.858   32.468   56.283   1.00  25.30
ATOM   17742   NH2   ARG   2641      22.854   32.674   53.996   1.00  28.38
ATOM   17743   C     ARG   2641      28.348   31.635   59.917   1.00  23.31
ATOM   17744   O     ARG   2641      29.508   31.524   59.511   1.00  20.74
ATOM   17745   N     ALA   2642      28.047   31.992   61.162   1.00  23.35
ATOM   17746   CA    ALA   2642      29.089   32.253   62.143   1.00  25.68
ATOM   17747   CB    ALA   2642      28.484   32.881   63.404   1.00  26.54
ATOM   17748   C     ALA   2642      29.765   30.929   62.484   1.00  26.20
ATOM   17749   O     ALA   2642      30.979   30.874   62.687   1.00  26.09
ATOM   17750   N     ALA   2643      28.972   29.861   62.538   1.00  24.61
ATOM   17751   CA    ALA   2643      29.504   28.538   62.847   1.00  24.08
ATOM   17752   CB    ALA   2643      28.360   27.535   62.989   1.00  25.00
ATOM   17753   C     ALA   2643      30.460   28.098   61.738   1.00  23.31
ATOM   17754   O     ALA   2643      31.491   27.492   62.008   1.00  22.53
ATOM   17755   N     VAL   2644      30.107   28.413   60.494   1.00  23.63
ATOM   17756   CA    VAL   2644      30.932   28.066   59.340   1.00  23.56
ATOM   17757   CB    VAL   2644      30.262   28.501   58.019   1.00  23.61
ATOM   17758   CG1   VAL   2644      31.193   28.248   56.850   1.00  23.86
ATOM   17759   CG2   VAL   2644      28.953   27.737   57.817   1.00  24.12
ATOM   17760   C     VAL   2644      32.287   28.762   59.443   1.00  25.21
ATOM   17761   O     VAL   2644      33.332   28.135   59.290   1.00  23.86
ATOM   17762   N     ARG   2645      32.257   30.066   59.689   1.00  24.95
ATOM   17763   CA    ARG   2645      33.478   30.846   59.828   1.00  27.28
ATOM   17764   CB    ARG   2645      33.136   32.318   60.084   1.00  27.82
ATOM   17765   CG    ARG   2645      32.446   33.015   58.922   1.00  28.30
ATOM   17766   CD    ARG   2645      32.294   34.509   59.187   1.00  32.06
ATOM   17767   NE    ARG   2645      31.361   34.790   60.279   1.00  34.28
ATOM   17768   CZ    ARG   2645      30.060   35.018   60.120   1.00  36.23
ATOM   17769   NH1   ARG   2645      29.522   35.002   58.906   1.00  34.78
ATOM   17770   NH2   ARG   2645      29.297   35.265   61.177   1.00  37.25
ATOM   17771   C     ARG   2645      34.340   30.303   60.970   1.00  27.28
ATOM   17772   O     ARG   2645      35.561   30.227   60.849   1.00  29.76
ATOM   17773   N     GLN   2646      33.702   29.918   62.072   1.00  27.84
ATOM   17774   CA    GLN   2646      34.411   29.384   63.233   1.00  27.15
ATOM   17775   CB    GLN   2646      33.428   29.144   64.384   1.00  31.32
ATOM   17776   CG    GLN   2646      34.082   28.858   65.726   1.00  36.87
ATOM   17777   CD    GLN   2646      33.092   28.337   66.757   1.00  41.60
ATOM   17778   OE1   GLN   2646      31.974   28.849   66.878   1.00  45.33
ATOM   17779   NE2   GLN   2646      33.503   27.319   67.512   1.00  43.04
ATOM   17780   C     GLN   2646      35.108   28.074   62.879   1.00  27.46
ATOM   17781   O     GLN   2646      36.251   27.835   63.275   1.00  24.55
ATOM   17782   N     TYR   2647      34.406   27.222   62.135   1.00  24.93
ATOM   17783   CA    TYR   2647      34.946   25.936   61.719   1.00  23.55
ATOM   17784   CB    TYR   2647      33.881   25.159   60.934   1.00  22.15
ATOM   17785   CG    TYR   2647      34.399   23.949   60.194   1.00  20.81
ATOM   17786   CD1   TYR   2647      35.147   22.972   60.848   1.00  22.12
ATOM   17787   CE1   TYR   2647      35.599   21.833   60.171   1.00  22.90
ATOM   17788   CD2   TYR   2647      34.113   23.764   58.846   1.00  21.36
ATOM   17789   CE2   TYR   2647      34.555   22.632   58.160   1.00  21.37
ATOM   17790   CZ    TYR   2647      35.296   21.675   58.827   1.00  23.37
ATOM   17791   OH    TYR   2647      35.742   20.558   58.149   1.00  23.07
ATOM   17792   C     TYR   2647      36.195   26.131   60.861   1.00  23.03
ATOM   17793   O     TYR   2647      37.210   25.465   61.064   1.00  22.24
ATOM   17794   N     MET   2648      36.112   27.053   59.909   1.00  23.54
ATOM   17795   CA    MET   2648      37.233   27.341   59.023   1.00  24.40
ATOM   17796   CB    MET   2648      36.817   28.368   57.968   1.00  24.61
ATOM   17797   CG    MET   2648      35.748   27.868   57.000   1.00  25.72
ATOM   17798   SD    MET   2648      35.032   29.213   56.049   1.00  29.67
ATOM   17799   CE    MET   2648      36.345   29.525   54.905   1.00  29.14
ATOM   17800   C     MET   2648      38.420   27.870   59.816   1.00  25.45
ATOM   17801   O     MET   2648      39.573   27.589   59.490   1.00  25.58
ATOM   17802   N     ALA   2649      38.133   28.636   60.861   1.00  25.72
ATOM   17803   CA    ALA   2649      39.188   29.208   61.690   1.00  25.41
ATOM   17804   CB    ALA   2649      38.609   30.311   62.575   1.00  23.43
ATOM   17805   C     ALA   2649      39.901   28.165   62.552   1.00  25.02
ATOM   17806   O     ALA   2649      41.131   28.091   62.557   1.00  25.14
ATOM   17807   N     GLU   2650      39.133   27.361   63.280   1.00  25.28
ATOM   17808   CA    GLU   2650      39.715   26.346   64.152   1.00  26.69
ATOM   17809   CB    GLU   2650      38.622   25.662   64.981   1.00  28.05
ATOM   17810   CG    GLU   2650      38.206   26.465   66.208   1.00  29.62
ATOM   17811   CD    GLU   2650      37.113   25.799   67.014   1.00  29.84
ATOM   17812   OE1   GLU   2650      37.152   24.562   67.173   1.00  32.30
ATOM   17813   OE2   GLU   2650      36.221   26.518   67.506   1.00  33.86
ATOM   17814   C     GLU   2650      40.539   25.296   63.418   1.00  26.90
ATOM   17815   O     GLU   2650      41.482   24.738   63.980   1.00  27.32
```

```
ATOM   17816  N    VAL  2651      40.181  25.021  62.168  1.00 26.19
ATOM   17817  CA   VAL  2651      40.914  24.042  61.380  1.00 25.27
ATOM   17818  CB   VAL  2651      40.163  23.681  60.078  1.00 24.96
ATOM   17819  CG1  VAL  2651      41.063  22.849  59.179  1.00 23.48
ATOM   17820  CG2  VAL  2651      38.891  22.900  60.411  1.00 23.49
ATOM   17821  C    VAL  2651      42.296  24.576  61.010  1.00 25.94
ATOM   17822  O    VAL  2651      43.279  23.836  61.032  1.00 25.81
ATOM   17823  N    GLU  2652      42.362  25.863  60.683  1.00 27.40
ATOM   17824  CA   GLU  2652      43.616  26.493  60.293  1.00 30.89
ATOM   17825  CB   GLU  2652      43.345  27.865  59.665  1.00 31.68
ATOM   17826  CG   GLU  2652      44.595  28.556  59.129  1.00 36.32
ATOM   17827  CD   GLU  2652      44.282  29.686  58.159  1.00 39.22
ATOM   17828  OE1  GLU  2652      45.229  30.374  57.715  1.00 40.91
ATOM   17829  OE2  GLU  2652      43.091  29.885  57.836  1.00 40.55
ATOM   17830  C    GLU  2652      44.614  26.638  61.438  1.00 32.09
ATOM   17831  O    GLU  2652      45.791  26.305  61.290  1.00 32.01
ATOM   17832  N    SER  2653      44.146  27.125  62.582  1.00 34.17
ATOM   17833  CA   SER  2653      45.026  27.310  63.727  1.00 36.02
ATOM   17834  CB   SER  2653      44.427  28.338  64.687  1.00 39.04
ATOM   17835  OG   SER  2653      44.357  29.613  64.066  1.00 44.62
ATOM   17836  C    SER  2653      45.317  26.001  64.454  1.00 35.06
ATOM   17837  O    SER  2653      46.243  25.923  65.262  1.00 36.58
ATOM   17838  N    GLY  2654      44.528  24.971  64.165  1.00 33.11
ATOM   17839  CA   GLY  2654      44.754  23.679  64.789  1.00 29.91
ATOM   17840  C    GLY  2654      43.918  23.352  66.012  1.00 27.78
ATOM   17841  O    GLY  2654      44.111  22.302  66.625  1.00 30.35
ATOM   17842  N    VAL  2655      42.999  24.239  66.376  1.00 26.05
ATOM   17843  CA   VAL  2655      42.129  24.020  67.529  1.00 24.30
ATOM   17844  CB   VAL  2655      41.290  25.277  67.832  1.00 25.65
ATOM   17845  CG1  VAL  2655      40.191  24.946  68.833  1.00 27.96
ATOM   17846  CG2  VAL  2655      42.196  26.371  68.399  1.00 26.98
ATOM   17847  C    VAL  2655      41.190  22.839  67.288  1.00 23.05
ATOM   17848  O    VAL  2655      40.821  22.125  68.221  1.00 19.84
ATOM   17849  N    TYR  2656      40.807  22.644  66.030  1.00 23.31
ATOM   17850  CA   TYR  2656      39.926  21.541  65.659  1.00 23.29
ATOM   17851  CB   TYR  2656      38.554  22.054  65.203  1.00 24.58
ATOM   17852  CG   TYR  2656      37.625  20.927  64.795  1.00 26.25
ATOM   17853  CD1  TYR  2656      37.053  20.092  65.755  1.00 26.34
ATOM   17854  CE1  TYR  2656      36.272  19.000  65.389  1.00 27.58
ATOM   17855  CD2  TYR  2656      37.384  20.646  63.450  1.00 26.60
ATOM   17856  CE2  TYR  2656      36.602  19.553  63.069  1.00 26.50
ATOM   17857  CZ   TYR  2656      36.052  18.734  64.048  1.00 28.77
ATOM   17858  OH   TYR  2656      35.298  17.633  63.693  1.00 29.76
ATOM   17859  C    TYR  2656      40.539  20.739  64.520  1.00 22.07
ATOM   17860  O    TYR  2656      40.971  21.308  63.519  1.00 21.40
ATOM   17861  N    PRO  2657      40.575  19.407  64.659  1.00 23.11
ATOM   17862  CD   PRO  2657      40.839  18.474  63.551  1.00 25.30
ATOM   17863  CA   PRO  2657      40.064  18.682  65.827  1.00 25.15
ATOM   17864  CB   PRO  2657      39.863  17.266  65.293  1.00 25.49
ATOM   17865  CG   PRO  2657      40.930  17.153  64.267  1.00 26.67
ATOM   17866  C    PRO  2657      40.987  18.704  67.047  1.00 26.33
ATOM   17867  O    PRO  2657      42.194  18.937  66.934  1.00 24.35
ATOM   17868  N    GLY  2658      40.402  18.451  68.212  1.00 28.19
ATOM   17869  CA   GLY  2658      41.175  18.424  69.435  1.00 29.27
ATOM   17870  C    GLY  2658      41.405  16.990  69.870  1.00 31.45
ATOM   17871  O    GLY  2658      41.011  16.048  69.175  1.00 29.26
ATOM   17872  N    GLU  2659      42.039  16.825  71.025  1.00 31.72
ATOM   17873  CA   GLU  2659      42.328  15.506  71.568  1.00 33.60
ATOM   17874  CB   GLU  2659      43.166  15.638  72.845  1.00 35.63
ATOM   17875  CG   GLU  2659      43.629  14.310  73.412  1.00 38.07
ATOM   17876  CD   GLU  2659      44.583  13.585  72.476  1.00 40.89
ATOM   17877  OE1  GLU  2659      44.763  12.360  72.642  1.00 41.36
ATOM   17878  OE2  GLU  2659      45.156  14.245  71.582  1.00 41.02
ATOM   17879  C    GLU  2659      41.043  14.746  71.874  1.00 33.45
ATOM   17880  O    GLU  2659      41.012  13.514  71.823  1.00 33.66
ATOM   17881  N    GLU  2660      39.981  15.484  72.193  1.00 34.34
ATOM   17882  CA   GLU  2660      38.692  14.869  72.507  1.00 34.69
ATOM   17883  CB   GLU  2660      37.738  15.890  73.136  1.00 36.58
ATOM   17884  CG   GLU  2660      38.416  17.063  73.818  1.00 41.62
ATOM   17885  CD   GLU  2660      38.836  18.147  72.839  1.00 43.50
ATOM   17886  OE1  GLU  2660      37.945  18.737  72.186  1.00 43.66
ATOM   17887  OE2  GLU  2660      40.055  18.409  72.727  1.00 44.50
ATOM   17888  C    GLU  2660      38.057  14.328  71.233  1.00 33.13
ATOM   17889  O    GLU  2660      37.165  13.482  71.287  1.00 33.50
ATOM   17890  N    HIS  2661      38.526  14.827  70.093  1.00 31.20
ATOM   17891  CA   HIS  2661      38.010  14.415  68.792  1.00 29.37
ATOM   17892  CB   HIS  2661      37.777  15.643  67.903  1.00 29.29
```

```
ATOM   17893  CG   HIS  2661      36.937  16.708  68.537  1.00 29.26
ATOM   17894  CD2  HIS  2661      37.231  17.984  68.884  1.00 28.56
ATOM   17895  ND1  HIS  2661      35.613  16.517  68.868  1.00 29.92
ATOM   17896  CE1  HIS  2661      35.126  17.630  69.391  1.00 29.59
ATOM   17897  NE2  HIS  2661      36.088  18.535  69.411  1.00 28.86
ATOM   17898  C    HIS  2661      38.983  13.480  68.076  1.00 28.74
ATOM   17899  O    HIS  2661      38.755  13.119  66.924  1.00 28.41
ATOM   17900  N    SER  2662      40.055  13.088  68.761  1.00 27.65
ATOM   17901  CA   SER  2662      41.077  12.226  68.171  1.00 27.75
ATOM   17902  CB   SER  2662      42.453  12.873  68.346  1.00 24.62
ATOM   17903  OG   SER  2662      42.507  14.139  67.714  1.00 24.83
ATOM   17904  C    SER  2662      41.128  10.800  68.711  1.00 27.87
ATOM   17905  O    SER  2662      40.798  10.541  69.872  1.00 28.57
ATOM   17906  N    PHE  2663      41.562   9.876  67.857  1.00 27.35
ATOM   17907  CA   PHE  2663      41.680   8.472  68.231  1.00 27.58
ATOM   17908  CB   PHE  2663      40.990   7.581  67.195  1.00 28.72
ATOM   17909  CG   PHE  2663      39.507   7.795  67.099  1.00 28.64
ATOM   17910  CD1  PHE  2663      38.948   8.405  65.980  1.00 28.22
ATOM   17911  CD2  PHE  2663      38.664   7.369  68.123  1.00 28.60
ATOM   17912  CE1  PHE  2663      37.568   8.585  65.879  1.00 28.53
ATOM   17913  CE2  PHE  2663      37.284   7.545  68.033  1.00 28.38
ATOM   17914  CZ   PHE  2663      36.736   8.152  66.909  1.00 27.60
ATOM   17915  C    PHE  2663      43.147   8.070  68.337  1.00 29.19
ATOM   17916  O    PHE  2663      44.009   8.662  67.693  1.00 28.67
ATOM   17917  N    HIS  2664      43.425   7.061  69.154  1.00 30.62
ATOM   17918  CA   HIS  2664      44.793   6.580  69.335  1.00 33.11
ATOM   17919  CB   HIS  2664      45.390   7.136  70.631  1.00 32.47
ATOM   17920  CG   HIS  2664      45.696   8.600  70.569  1.00 31.82
ATOM   17921  CD2  HIS  2664      45.143   9.657  71.209  1.00 31.31
ATOM   17922  ND1  HIS  2664      46.670   9.119  69.743  1.00 31.66
ATOM   17923  CE1  HIS  2664      46.704  10.433  69.877  1.00 32.26
ATOM   17924  NE2  HIS  2664      45.787  10.785  70.761  1.00 31.44
ATOM   17925  C    HIS  2664      44.850   5.060  69.347  1.00 34.16
ATOM   17926  O    HIS  2664      45.924   4.517  69.013  1.00 34.77
ATOM   17927  OXT  HIS  2664      43.825   4.436  69.698  1.00 34.27
ATOM   17928  C1   KPL  2665      32.243  11.877  55.862  1.00 40.79
ATOM   17929  C2   KPL  2665      32.961  11.755  54.501  1.00 41.02
ATOM   17930  C3   KPL  2665      33.077  13.146  53.870  1.00 41.20
ATOM   17931  C4   KPL  2665      34.387  11.202  54.712  1.00 42.66
ATOM   17932  O1   KPL  2665      34.336   9.899  55.310  1.00 45.13
ATOM   17933  C5   KPL  2665      32.150  10.836  53.550  1.00 39.59
ATOM   17934  O2   KPL  2665      32.663   9.838  53.081  1.00 38.96
ATOM   17935  C6   KPL  2665      30.715  11.146  53.180  1.00 37.68
ATOM   17936  O3   KPL  2665      30.159  12.135  53.620  1.00 35.87
ATOM   17937  O4   KPL  2665      30.039  10.319  52.357  1.00 34.01
ATOM   17938  CB   MET  2701      34.899  19.058  -4.231  1.00 73.64
ATOM   17939  CG   MET  2701      35.731  17.961  -3.594  1.00 74.75
ATOM   17940  SD   MET  2701      37.148  17.478  -4.583  1.00 76.63
ATOM   17941  CE   MET  2701      36.494  16.017  -5.398  1.00 76.51
ATOM   17942  C    MET  2701      32.655  18.015  -4.580  1.00 71.20
ATOM   17943  O    MET  2701      31.627  18.329  -5.182  1.00 71.65
ATOM   17944  N    MET  2701      33.341  18.824  -2.319  1.00 71.84
ATOM   17945  CA   MET  2701      33.434  19.060  -3.787  1.00 72.13
ATOM   17946  N    LYS  2702      33.136  16.777  -4.578  1.00 69.46
ATOM   17947  CA   LYS  2702      32.480  15.710  -5.314  1.00 67.58
ATOM   17948  CB   LYS  2702      33.180  15.500  -6.657  1.00 68.24
ATOM   17949  CG   LYS  2702      33.257  16.745  -7.532  1.00 69.09
ATOM   17950  CD   LYS  2702      31.884  17.196  -8.031  1.00 69.83
ATOM   17951  CE   LYS  2702      31.288  16.208  -9.025  1.00 70.29
ATOM   17952  NZ   LYS  2702      29.978  16.690  -9.549  1.00 70.64
ATOM   17953  C    LYS  2702      32.359  14.356  -4.586  1.00 65.56
ATOM   17954  O    LYS  2702      32.309  13.312  -5.230  1.00 66.40
ATOM   17955  N    PRO  2703      32.359  14.356  -3.236  1.00 62.79
ATOM   17956  CD   PRO  2703      31.899  13.174  -2.477  1.00 62.15
ATOM   17957  CA   PRO  2703      32.399  15.527  -2.353  1.00 60.20
ATOM   17958  CB   PRO  2703      31.472  15.124  -1.221  1.00 60.98
ATOM   17959  CG   PRO  2703      31.824  13.700  -1.045  1.00 61.24
ATOM   17960  C    PRO  2703      33.838  15.784  -1.867  1.00 57.10
ATOM   17961  O    PRO  2703      34.808  15.402  -2.523  1.00 56.61
ATOM   17962  N    THR  2704      33.954  16.429  -0.711  1.00 54.53
ATOM   17963  CA   THR  2704      35.261  16.729  -0.126  1.00 51.38
ATOM   17964  CB   THR  2704      35.267  18.095   0.603  1.00 51.73
ATOM   17965  OG1  THR  2704      34.978  19.147  -0.328  1.00 52.06
ATOM   17966  CG2  THR  2704      36.630  18.346   1.240  1.00 50.43
ATOM   17967  C    THR  2704      35.628  15.647   0.884  1.00 49.86
ATOM   17968  O    THR  2704      35.041  15.571   1.963  1.00 48.30
ATOM   17969  N    THR  2705      36.605  14.819   0.532  1.00 48.07
```

```
ATOM   17970  CA   THR   2705      37.040  13.743   1.410  1.00 47.18
ATOM   17971  CB   THR   2705      37.087  12.397   0.664  1.00 46.54
ATOM   17972  OG1  THR   2705      38.071  12.459  -0.375  1.00 45.99
ATOM   17973  CG2  THR   2705      35.728  12.081   0.051  1.00 46.51
ATOM   17974  C    THR   2705      38.422  14.017   1.995  1.00 46.48
ATOM   17975  O    THR   2705      39.061  15.016   1.664  1.00 45.98
ATOM   17976  N    ILE   2706      38.875  13.119   2.864  1.00 45.87
ATOM   17977  CA   ILE   2706      40.180  13.245   3.502  1.00 45.37
ATOM   17978  CB   ILE   2706      40.461  12.049   4.438  1.00 45.76
ATOM   17979  CG2  ILE   2706      41.744  12.292   5.223  1.00 45.05
ATOM   17980  CG1  ILE   2706      39.287  11.852   5.400  1.00 47.29
ATOM   17981  CD1  ILE   2706      39.380  10.579   6.232  1.00 47.98
ATOM   17982  C    ILE   2706      41.278  13.293   2.443  1.00 45.82
ATOM   17983  O    ILE   2706      42.361  13.834   2.676  1.00 44.79
ATOM   17984  N    SER   2707      40.992  12.719   1.278  1.00 45.94
ATOM   17985  CA   SER   2707      41.949  12.697   0.174  1.00 46.20
ATOM   17986  CB   SER   2707      41.338  11.997  -1.045  1.00 46.03
ATOM   17987  OG   SER   2707      41.014  10.650  -0.758  1.00 47.96
ATOM   17988  C    SER   2707      42.380  14.110  -0.214  1.00 45.55
ATOM   17989  O    SER   2707      43.555  14.357  -0.489  1.00 44.61
ATOM   17990  N    LEU   2708      41.423  15.032  -0.236  1.00 45.78
ATOM   17991  CA   LEU   2708      41.699  16.422  -0.590  1.00 46.61
ATOM   17992  CB   LEU   2708      40.410  17.250  -0.538  1.00 47.45
ATOM   17993  CG   LEU   2708      39.904  17.852  -1.853  1.00 47.62
ATOM   17994  CD1  LEU   2708      38.612  18.619  -1.609  1.00 48.54
ATOM   17995  CD2  LEU   2708      40.960  18.772  -2.436  1.00 48.50
ATOM   17996  C    LEU   2708      42.741  17.051   0.333  1.00 46.79
ATOM   17997  O    LEU   2708      43.699  17.671  -0.133  1.00 46.13
ATOM   17998  N    LEU   2709      42.549  16.890   1.640  1.00 47.03
ATOM   17999  CA   LEU   2709      43.469  17.452   2.626  1.00 48.38
ATOM   18000  CB   LEU   2709      42.935  17.231   4.044  1.00 47.81
ATOM   18001  CG   LEU   2709      41.545  17.782   4.367  1.00 48.04
ATOM   18002  CD1  LEU   2709      41.209  17.497   5.827  1.00 46.71
ATOM   18003  CD2  LEU   2709      41.510  19.276   4.098  1.00 48.90
ATOM   18004  C    LEU   2709      44.854  16.829   2.505  1.00 49.28
ATOM   18005  O    LEU   2709      45.861  17.455   2.835  1.00 48.60
ATOM   18006  N    GLN   2710      44.895  15.589   2.032  1.00 50.99
ATOM   18007  CA   GLN   2710      46.154  14.880   1.867  1.00 52.96
ATOM   18008  CB   GLN   2710      45.893  13.391   1.632  1.00 54.28
ATOM   18009  CG   GLN   2710      47.137  12.520   1.688  1.00 57.12
ATOM   18010  CD   GLN   2710      47.721  12.419   3.087  1.00 58.97
ATOM   18011  OE1  GLN   2710      48.102  13.423   3.692  1.00 60.04
ATOM   18012  NE2  GLN   2710      47.794  11.198   3.607  1.00 59.77
ATOM   18013  C    GLN   2710      46.909  15.476   0.683  1.00 53.46
ATOM   18014  O    GLN   2710      48.096  15.790   0.787  1.00 53.06
ATOM   18015  N    LYS   2711      46.214  15.635  -0.441  1.00 53.98
ATOM   18016  CA   LYS   2711      46.824  16.205  -1.636  1.00 54.78
ATOM   18017  CB   LYS   2711      45.817  16.278  -2.789  1.00 55.24
ATOM   18018  CG   LYS   2711      46.421  16.833  -4.076  1.00 55.62
ATOM   18019  CD   LYS   2711      45.396  17.536  -4.955  1.00 57.13
ATOM   18020  CE   LYS   2711      44.346  16.586  -5.502  1.00 57.37
ATOM   18021  NZ   LYS   2711      43.404  17.307  -6.407  1.00 58.73
ATOM   18022  C    LYS   2711      47.318  17.614  -1.332  1.00 54.66
ATOM   18023  O    LYS   2711      48.382  18.025  -1.792  1.00 55.31
ATOM   18024  N    TYR   2712      46.531  18.354  -0.558  1.00 54.70
ATOM   18025  CA   TYR   2712      46.881  19.721  -0.193  1.00 54.60
ATOM   18026  CB   TYR   2712      45.796  20.328   0.698  1.00 54.84
ATOM   18027  CG   TYR   2712      44.590  20.842  -0.059  1.00 55.24
ATOM   18028  CD1  TYR   2712      43.480  21.344   0.620  1.00 55.21
ATOM   18029  CE1  TYR   2712      42.375  21.837  -0.071  1.00 55.78
ATOM   18030  CD2  TYR   2712      44.564  20.847  -1.456  1.00 55.42
ATOM   18031  CE2  TYR   2712      43.465  21.338  -2.155  1.00 55.89
ATOM   18032  CZ   TYR   2712      42.376  21.830  -1.458  1.00 55.09
ATOM   18033  OH   TYR   2712      41.290  22.313  -2.145  1.00 55.85
ATOM   18034  C    TYR   2712      48.227  19.825   0.505  1.00 54.49
ATOM   18035  O    TYR   2712      49.023  20.709   0.191  1.00 54.80
ATOM   18036  N    LYS   2713      48.485  18.928   1.450  1.00 54.67
ATOM   18037  CA   LYS   2713      49.747  18.958   2.175  1.00 55.19
ATOM   18038  CB   LYS   2713      49.787  17.860   3.241  1.00 53.74
ATOM   18039  CG   LYS   2713      51.072  17.868   4.056  1.00 52.19
ATOM   18040  CD   LYS   2713      50.915  17.134   5.372  1.00 50.87
ATOM   18041  CE   LYS   2713      52.169  17.275   6.218  1.00 50.54
ATOM   18042  NZ   LYS   2713      51.974  16.777   7.605  1.00 49.42
ATOM   18043  C    LYS   2713      50.935  18.809   1.232  1.00 55.89
ATOM   18044  O    LYS   2713      51.998  19.380   1.471  1.00 56.25
ATOM   18045  N    GLN   2714      50.753  18.042   0.161  1.00 57.18
ATOM   18046  CA   GLN   2714      51.820  17.844  -0.812  1.00 58.36
```

```
ATOM   18047  CB   GLN   2714      51.438  16.763  -1.819  1.00 59.42
ATOM   18048  CG   GLN   2714      51.254  15.390  -1.216  1.00 61.57
ATOM   18049  CD   GLN   2714      50.997  14.336  -2.270  1.00 62.96
ATOM   18050  OE1  GLN   2714      51.813  14.134  -3.171  1.00 64.00
ATOM   18051  NE2  GLN   2714      49.859  13.656  -2.166  1.00 63.63
ATOM   18052  C    GLN   2714      52.073  19.146  -1.551  1.00 58.50
ATOM   18053  O    GLN   2714      53.217  19.563  -1.722  1.00 59.24
ATOM   18054  N    GLU   2715      50.992  19.785  -1.986  1.00 58.54
ATOM   18055  CA   GLU   2715      51.082  21.042  -2.714  1.00 58.89
ATOM   18056  CB   GLU   2715      49.783  21.294  -3.477  1.00 59.02
ATOM   18057  CG   GLU   2715      49.372  20.144  -4.373  1.00 59.98
ATOM   18058  CD   GLU   2715      48.032  20.381  -5.034  1.00 60.87
ATOM   18059  OE1  GLU   2715      47.061  20.683  -4.309  1.00 61.95
ATOM   18060  OE2  GLU   2715      47.946  20.260  -6.274  1.00 61.16
ATOM   18061  C    GLU   2715      51.352  22.199  -1.761  1.00 58.97
ATOM   18062  O    GLU   2715      51.366  23.360  -2.169  1.00 59.41
ATOM   18063  N    LYS   2716      51.563  21.874  -0.489  1.00 58.61
ATOM   18064  CA   LYS   2716      51.836  22.882   0.531  1.00 58.78
ATOM   18065  CB   LYS   2716      53.169  23.578   0.244  1.00 58.70
ATOM   18066  CG   LYS   2716      54.325  22.634  -0.032  1.00 59.65
ATOM   18067  CD   LYS   2716      54.665  21.785   1.178  1.00 60.37
ATOM   18068  CE   LYS   2716      55.783  20.805   0.853  1.00 61.03
ATOM   18069  NZ   LYS   2716      57.003  21.501   0.359  1.00 60.83
ATOM   18070  C    LYS   2716      50.722  23.924   0.561  1.00 58.16
ATOM   18071  O    LYS   2716      50.926  25.047   1.020  1.00 58.70
ATOM   18072  N    LYS   2717      49.548  23.544   0.065  1.00 57.44
ATOM   18073  CA   LYS   2717      48.400  24.442   0.024  1.00 56.21
ATOM   18074  CB   LYS   2717      47.502  24.083  -1.167  1.00 57.20
ATOM   18075  CG   LYS   2717      46.344  25.048  -1.400  1.00 58.48
ATOM   18076  CD   LYS   2717      45.574  24.717  -2.679  1.00 59.26
ATOM   18077  CE   LYS   2717      46.441  24.883  -3.925  1.00 60.27
ATOM   18078  NZ   LYS   2717      45.681  24.594  -5.174  1.00 59.88
ATOM   18079  C    LYS   2717      47.604  24.368   1.326  1.00 55.15
ATOM   18080  O    LYS   2717      46.819  23.443   1.536  1.00 55.14
ATOM   18081  N    ARG   2718      47.820  25.350   2.197  1.00 53.27
ATOM   18082  CA   ARG   2718      47.135  25.413   3.483  1.00 52.15
ATOM   18083  CB   ARG   2718      47.728  26.537   4.334  1.00 52.42
ATOM   18084  CG   ARG   2718      49.122  26.226   4.849  1.00 53.20
ATOM   18085  CD   ARG   2718      49.749  27.416   5.548  1.00 54.76
ATOM   18086  NE   ARG   2718      50.135  28.463   4.605  1.00 55.74
ATOM   18087  CZ   ARG   2718      50.810  29.557   4.944  1.00 56.58
ATOM   18088  NH1  ARG   2718      51.173  29.750   6.204  1.00 56.22
ATOM   18089  NH2  ARG   2718      51.131  30.454   4.021  1.00 57.45
ATOM   18090  C    ARG   2718      45.632  25.612   3.328  1.00 50.84
ATOM   18091  O    ARG   2718      45.182  26.468   2.565  1.00 50.29
ATOM   18092  N    PHE   2719      44.863  24.816   4.067  1.00 48.72
ATOM   18093  CA   PHE   2719      43.406  24.872   4.016  1.00 46.09
ATOM   18094  CB   PHE   2719      42.856  23.483   3.674  1.00 47.13
ATOM   18095  CG   PHE   2719      43.372  22.390   4.565  1.00 46.19
ATOM   18096  CD1  PHE   2719      42.764  22.122   5.788  1.00 46.63
ATOM   18097  CD2  PHE   2719      44.483  21.643   4.193  1.00 46.52
ATOM   18098  CE1  PHE   2719      43.257  21.124   6.628  1.00 46.28
ATOM   18099  CE2  PHE   2719      44.984  20.644   5.024  1.00 46.72
ATOM   18100  CZ   PHE   2719      44.369  20.383   6.245  1.00 46.49
ATOM   18101  C    PHE   2719      42.788  25.375   5.318  1.00 44.37
ATOM   18102  O    PHE   2719      43.406  25.307   6.381  1.00 43.11
ATOM   18103  N    ALA   2720      41.561  25.879   5.223  1.00 42.30
ATOM   18104  CA   ALA   2720      40.848  26.403   6.381  1.00 41.78
ATOM   18105  CB   ALA   2720      40.263  27.772   6.049  1.00 41.45
ATOM   18106  C    ALA   2720      39.738  25.467   6.860  1.00 40.79
ATOM   18107  O    ALA   2720      39.120  24.756   6.065  1.00 39.99
ATOM   18108  N    THR   2721      39.495  25.481   8.169  1.00 40.42
ATOM   18109  CA   THR   2721      38.459  24.659   8.797  1.00 38.92
ATOM   18110  CB   THR   2721      39.074  23.502   9.607  1.00 39.08
ATOM   18111  OG1  THR   2721      40.006  22.786   8.787  1.00 41.05
ATOM   18112  CG2  THR   2721      37.986  22.545  10.073  1.00 41.39
ATOM   18113  C    THR   2721      37.660  25.543   9.757  1.00 37.36
ATOM   18114  O    THR   2721      38.181  26.531  10.269  1.00 37.24
ATOM   18115  N    ILE   2722      36.404  25.188  10.010  1.00 34.57
ATOM   18116  CA   ILE   2722      35.575  25.983  10.907  1.00 33.33
ATOM   18117  CB   ILE   2722      34.856  27.114  10.121  1.00 33.46
ATOM   18118  CG2  ILE   2722      33.767  26.519   9.232  1.00 32.91
ATOM   18119  CG1  ILE   2722      34.256  28.136  11.091  1.00 33.34
ATOM   18120  CD1  ILE   2722      33.727  29.396  10.411  1.00 33.25
ATOM   18121  C    ILE   2722      34.539  25.121  11.633  1.00 33.03
ATOM   18122  O    ILE   2722      34.165  24.048  11.160  1.00 32.21
ATOM   18123  N    THR   2723      34.089  25.591  12.791  1.00 31.25
```

```
ATOM   18124   CA    THR   2723      33.099   24.861   13.563   1.00 30.50
ATOM   18125   CB    THR   2723      33.120   25.275   15.044   1.00 31.78
ATOM   18126   OG1   THR   2723      32.810   26.669   15.150   1.00 33.34
ATOM   18127   CG2   THR   2723      34.489   25.014   15.648   1.00 31.14
ATOM   18128   C     THR   2723      31.716   25.143   12.996   1.00 29.87
ATOM   18129   O     THR   2723      31.491   26.174   12.360   1.00 29.14
ATOM   18130   N     ALA   2724      30.794   24.214   13.218   1.00 27.82
ATOM   18131   CA    ALA   2724      29.428   24.364   12.739   1.00 26.76
ATOM   18132   CB    ALA   2724      29.332   23.966   11.271   1.00 26.45
ATOM   18133   C     ALA   2724      28.556   23.462   13.594   1.00 26.25
ATOM   18134   O     ALA   2724      28.991   22.388   13.999   1.00 24.53
ATOM   18135   N     TYR   2725      27.336   23.905   13.877   1.00 25.34
ATOM   18136   CA    TYR   2725      26.422   23.126   14.702   1.00 25.41
ATOM   18137   CB    TYR   2725      26.441   23.634   16.145   1.00 25.02
ATOM   18138   CG    TYR   2725      27.818   23.940   16.681   1.00 25.72
ATOM   18139   CD1   TYR   2725      28.264   25.257   16.791   1.00 27.23
ATOM   18140   CE1   TYR   2725      29.534   25.548   17.278   1.00 27.51
ATOM   18141   CD2   TYR   2725      28.678   22.916   17.071   1.00 24.40
ATOM   18142   CE2   TYR   2725      29.951   23.195   17.557   1.00 27.21
ATOM   18143   CZ    TYR   2725      30.372   24.515   17.659   1.00 27.25
ATOM   18144   OH    TYR   2725      31.632   24.797   18.149   1.00 29.59
ATOM   18145   C     TYR   2725      24.996   23.188   14.181   1.00 25.48
ATOM   18146   O     TYR   2725      24.073   22.716   14.847   1.00 25.90
ATOM   18147   N     ASP   2726      24.812   23.773   12.999   1.00 24.99
ATOM   18148   CA    ASP   2726      23.475   23.895   12.424   1.00 25.25
ATOM   18149   CB    ASP   2726      22.736   25.085   13.049   1.00 24.48
ATOM   18150   CG    ASP   2726      23.368   26.424   12.701   1.00 27.30
ATOM   18151   OD1   ASP   2726      23.278   26.844   11.529   1.00 27.92
ATOM   18152   OD2   ASP   2726      23.954   27.055   13.608   1.00 26.94
ATOM   18153   C     ASP   2726      23.463   24.023   10.906   1.00 25.69
ATOM   18154   O     ASP   2726      24.482   24.317   10.282   1.00 25.88
ATOM   18155   N     TYR   2727      22.289   23.792   10.329   1.00 25.18
ATOM   18156   CA    TYR   2727      22.080   23.855    8.890   1.00 27.78
ATOM   18157   CB    TYR   2727      20.607   23.601    8.575   1.00 29.33
ATOM   18158   CG    TYR   2727      20.215   23.942    7.156   1.00 32.36
ATOM   18159   CD1   TYR   2727      20.418   23.035    6.117   1.00 33.43
ATOM   18160   CE1   TYR   2727      20.049   23.348    4.808   1.00 35.74
ATOM   18161   CD2   TYR   2727      19.636   25.177    6.853   1.00 32.74
ATOM   18162   CE2   TYR   2727      19.266   25.501    5.550   1.00 34.63
ATOM   18163   CZ    TYR   2727      19.473   24.581    4.535   1.00 34.95
ATOM   18164   OH    TYR   2727      19.090   24.890    3.250   1.00 36.38
ATOM   18165   C     TYR   2727      22.481   25.185    8.261   1.00 28.49
ATOM   18166   O     TYR   2727      23.244   25.219    7.296   1.00 26.62
ATOM   18167   N     SER   2728      21.940   26.273    8.798   1.00 29.50
ATOM   18168   CA    SER   2728      22.215   27.601    8.270   1.00 31.15
ATOM   18169   CB    SER   2728      21.606   28.670    9.174   1.00 30.32
ATOM   18170   OG    SER   2728      20.195   28.606    9.127   1.00 30.03
ATOM   18171   C     SER   2728      23.691   27.885    8.063   1.00 32.53
ATOM   18172   O     SER   2728      24.151   28.017    6.927   1.00 34.08
ATOM   18173   N     PHE   2729      24.441   27.979    9.152   1.00 33.01
ATOM   18174   CA    PHE   2729      25.860   28.263    9.026   1.00 34.03
ATOM   18175   CB    PHE   2729      26.514   28.379   10.402   1.00 32.92
ATOM   18176   CG    PHE   2729      26.244   29.689   11.084   1.00 33.06
ATOM   18177   CD1   PHE   2729      25.190   29.824   11.979   1.00 32.75
ATOM   18178   CD2   PHE   2729      27.041   30.800   10.816   1.00 33.37
ATOM   18179   CE1   PHE   2729      24.934   31.046   12.601   1.00 33.58
ATOM   18180   CE2   PHE   2729      26.793   32.024   11.430   1.00 33.46
ATOM   18181   CZ    PHE   2729      25.738   32.148   12.325   1.00 33.47
ATOM   18182   C     PHE   2729      26.598   27.241    8.171   1.00 34.90
ATOM   18183   O     PHE   2729      27.417   27.614    7.333   1.00 35.39
ATOM   18184   N     ALA   2730      26.310   25.958    8.367   1.00 34.77
ATOM   18185   CA    ALA   2730      26.968   24.919    7.582   1.00 34.81
ATOM   18186   CB    ALA   2730      26.409   23.544    7.949   1.00 34.81
ATOM   18187   C     ALA   2730      26.744   25.198    6.099   1.00 34.77
ATOM   18188   O     ALA   2730      27.638   25.002    5.275   1.00 34.75
ATOM   18189   N     LYS   2731      25.540   25.659    5.777   1.00 35.58
ATOM   18190   CA    LYS   2731      25.154   25.983    4.408   1.00 36.11
ATOM   18191   CB    LYS   2731      23.657   26.294    4.361   1.00 37.50
ATOM   18192   CG    LYS   2731      23.151   26.818    3.033   1.00 38.67
ATOM   18193   CD    LYS   2731      23.122   25.740    1.977   1.00 40.61
ATOM   18194   CE    LYS   2731      22.524   26.278    0.685   1.00 42.74
ATOM   18195   NZ    LYS   2731      22.418   25.227   -0.361   1.00 43.93
ATOM   18196   C     LYS   2731      25.938   27.189    3.909   1.00 36.82
ATOM   18197   O     LYS   2731      26.426   27.204    2.777   1.00 35.95
ATOM   18198   N     LEU   2732      26.048   28.198    4.766   1.00 37.43
ATOM   18199   CA    LEU   2732      26.762   29.421    4.434   1.00 38.34
ATOM   18200   CB    LEU   2732      26.576   30.449    5.558   1.00 38.63
```

```
ATOM   18201  CG   LEU  2732     27.150  31.858   5.367  1.00 38.74
ATOM   18202  CD1  LEU  2732     26.427  32.832   6.281  1.00 37.58
ATOM   18203  CD2  LEU  2732     28.643  31.853   5.652  1.00 38.30
ATOM   18204  C    LEU  2732     28.247  29.163   4.179  1.00 38.90
ATOM   18205  O    LEU  2732     28.830  29.742   3.264  1.00 39.61
ATOM   18206  N    PHE  2733     28.861  28.292   4.976  1.00 38.38
ATOM   18207  CA   PHE  2733     30.278  27.992   4.793  1.00 39.32
ATOM   18208  CB   PHE  2733     30.828  27.199   5.984  1.00 38.73
ATOM   18209  CG   PHE  2733     30.623  27.870   7.314  1.00 38.08
ATOM   18210  CD1  PHE  2733     30.813  29.241   7.459  1.00 37.35
ATOM   18211  CD2  PHE  2733     30.267  27.123   8.430  1.00 36.25
ATOM   18212  CE1  PHE  2733     30.652  29.856   8.698  1.00 36.41
ATOM   18213  CE2  PHE  2733     30.104  27.729   9.671  1.00 36.51
ATOM   18214  CZ   PHE  2733     30.297  29.098   9.804  1.00 36.45
ATOM   18215  C    PHE  2733     30.509  27.192   3.514  1.00 39.89
ATOM   18216  O    PHE  2733     31.449  27.455   2.764  1.00 39.04
ATOM   18217  N    ALA  2734     29.642  26.213   3.274  1.00 40.69
ATOM   18218  CA   ALA  2734     29.746  25.366   2.094  1.00 42.63
ATOM   18219  CB   ALA  2734     28.712  24.246   2.166  1.00 41.54
ATOM   18220  C    ALA  2734     29.564  26.157   0.800  1.00 44.13
ATOM   18221  O    ALA  2734     30.273  25.926  -0.177  1.00 44.26
ATOM   18222  N    ASP  2735     28.612  27.085   0.795  1.00 45.42
ATOM   18223  CA   ASP  2735     28.354  27.889  -0.394  1.00 47.29
ATOM   18224  CB   ASP  2735     27.145  28.802  -0.185  1.00 47.94
ATOM   18225  CG   ASP  2735     25.840  28.038  -0.114  1.00 49.27
ATOM   18226  OD1  ASP  2735     25.710  27.008  -0.815  1.00 49.87
ATOM   18227  OD2  ASP  2735     24.937  28.478   0.630  1.00 49.47
ATOM   18228  C    ASP  2735     29.555  28.738  -0.794  1.00 47.96
ATOM   18229  O    ASP  2735     29.759  29.013  -1.976  1.00 47.45
ATOM   18230  N    GLU  2736     30.343  29.154   0.193  1.00 48.95
ATOM  ·18231  CA   GLU  2736     31.520  29.976  -0.062  1.00 50.11
ATOM   18232  CB   GLU  2736     31.884  30.780   1.187  1.00 50.79
ATOM   18233  CG   GLU  2736     30.787  31.710   1.663  1.00 51.69
ATOM   18234  CD   GLU  2736     30.351  32.690   0.594  1.00 52.87
ATOM   18235  OE1  GLU  2736     31.200  33.477   0.129  1.00 54.23
ATOM   18236· OE2  GLU  2736     29.160  32.673   0.219  1.00 52.97
ATOM   18237  C    GLU  2736     32.717  29.139  -0.494  1.00 50.56
ATOM   18238  O    GLU  2736     33.330  29.405  -1.528  1.00 51.77
ATOM   18239  N    GLY  2737     33.051  28.127   0.299  1.00 50.60
ATOM   18240  CA   GLY  2737     34.181  27.281  -0.044  1.00 49.87
ATOM   18241  C    GLY  2737     34.630  26.374   1.082  1.00 49.32
ATOM   18242  O    GLY  2737     35.293  25.367   0.839  1.00 49.07
ATOM   18243  N    LEU  2738     34.281  26.735   2.313  1.00 49.01
ATOM   18244  CA   LEU  2738     34.646  25.936   3.475  1.00 48.38
ATOM   18245  CB   LEU  2738     34.252  26.658   4.765  1.00 48.66
ATOM   18246  CG   LEU  2738     35.241  27.691   5.301  1.00 47.93
ATOM   18247  CD1  LEU  2738     34.628  28.435   6.473  1.00 47.98
ATOM   18248  CD2  LEU  2738     36.523  26.992   5.726  1.00 49.25
ATOM   18249  C    LEU  2738     33.958  24.579   3.418  1.00 47.74
ATOM   18250  O    LEU  2738     32.781  24.457   3.757  1.00 48.29
ATOM   18251  N    ASN  2739     34.701  23.564   2.986  1.00 46.36
ATOM   18252  CA   ASN  2739     34.168  22.214   2.873  1.00 45.27
ATOM   18253  CB   ASN  2739     34.513  21.624   1.502  1.00 46.52
ATOM   18254  CG   ASN  2739     34.170  22.564   0.356  1.00 48.47
ATOM   18255  OD1  ASN  2739     33.080  23.142   0.315  1.00 49.82
ATOM   18256  ND2  ASN  2739     35.096  22.714  -0.586  1.00 48.29
ATOM   18257  C    ASN  2739     34.733  21.319   3.975  1.00 43.36
ATOM   18258  O    ASN  2739     34.751  20.097   3.850  1.00 44.23
ATOM   18259  N    VAL  2740     35.196  21.938   5.054  1.00 40.65
ATOM   18260  CA   VAL  2740     35.753  21.200   6.179  1.00 38.58
ATOM  ·18261  CB   VAL  2740     37.294  21.276   6.180  1.00 39.42
ATOM  _18262  CG1  VAL  2740     37.863  20.397   7.282  1.00 38.41
ATOM   18263  CG2  VAL  2740     37.836  20.840   4.826  1.00 39.41
ATOM   18264  C    VAL  2740     35.206  21.797   7.472  1.00 37.55
ATOM   18265  O    VAL  2740     35.670  22.843   7.932  1.00 36.45
ATOM   18266  N    MET  2741     34.213  21.128   8.052  1.00 35.79
ATOM   18267  CA   MET  2741     33.586  21.605   9.280  1.00 33.14
ATOM   18268  CB   MET  2741     32.097  21.858   9.019  1.00 33.81
ATOM   18269  CG   MET  2741     31.862  23.092   8.157  1.00 33.62
ATOM   18270  SD   MET  2741     30.216  23.250   7.476  1.00 35.47
ATOM   18271  CE   MET  2741     30.583  23.290   5.712  1.00 31.93
ATOM   18272  C    MET  2741     33.781  20.666  10.466  1.00 31.98
ATOM   18273  O    MET  2741     33.970  19.461  10.301  1.00 30.77
ATOM   18274  N    LEU  2742     33.737  21.228  11.666  1.00 30.44
ATOM   18275  CA   LEU  2742     33.927  20.442  12.870  1.00 29.16
ATOM   18276  CB   LEU  2742     35.268  20.818  13.517  1.00 31.59
ATOM   18277  CG   LEU  2742     35.690  20.194  14.857  1.00 34.91
```

```
ATOM   18278  CD1 LEU 2742      34.985  20.907  15.998  1.00 36.28
ATOM   18279  CD2 LEU 2742      35.382  18.698  14.872  1.00 35.47
ATOM   18280  C   LEU 2742      32.784  20.603  13.871  1.00 28.08
ATOM   18281  O   LEU 2742      32.471  21.710  14.315  1.00 26.39
ATOM   18282  N   VAL 2743      32.154  19.479  14.205  1.00 26.29
ATOM   18283  CA  VAL 2743      31.058  19.457  15.165  1.00 24.79
ATOM   18284  CB  VAL 2743      29.926  18.504  14.705  1.00 24.91
ATOM   18285  CG1 VAL 2743      28.798  18.501  15.733  1.00 23.46
ATOM   18286  CG2 VAL 2743      29.399  18.927  13.336  1.00 23.03
ATOM   18287  C   VAL 2743      31.660  18.942  16.468  1.00 25.50
ATOM   18288  O   VAL 2743      31.584  17.751  16.765  1.00 24.89
ATOM   18289  N   GLY 2744      32.271  19.846  17.234  1.00 25.53
ATOM   18290  CA  GLY 2744      32.909  19.460  18.482  1.00 24.69
ATOM   18291  C   GLY 2744      32.088  19.678  19.739  1.00 25.51
ATOM   18292  O   GLY 2744      31.083  20.389  19.727  1.00 23.34
ATOM   18293  N   ASP 2745      32.530  19.059  20.829  1.00 26.45
ATOM   18294  CA  ASP 2745      31.846  19.170  22.109  1.00 27.04
ATOM   18295  CB  ASP 2745      32.468  18.218  23.136  1.00 28.02
ATOM   18296  CG  ASP 2745      33.963  18.422  23.283  1.00 31.06
ATOM   18297  OD1 ASP 2745      34.442  19.544  23.010  1.00 31.67
ATOM   18298  OD2 ASP 2745      34.655  17.469  23.674  1.00 33.16
ATOM   18299  C   ASP 2745      31.888  20.599  22.646  1.00 27.84
ATOM   18300  O   ASP 2745      31.295  20.902  23.682  1.00 26.58
ATOM   18301  N   SER 2746      32.598  21.476  21.946  1.00 27.48
ATOM   18302  CA  SER 2746      32.675  22.864  22.368  1.00 26.36
ATOM   18303  CB  SER 2746      33.541  23.670  21.397  1.00 26.95
ATOM   18304  OG  SER 2746      33.076  23.552  20.064  1.00 29.19
ATOM   18305  C   SER 2746      31.254  23.417  22.398  1.00 27.45
ATOM   18306  O   SER 2746      30.946  24.342  23.154  1.00 26.43
ATOM   18307  N   LEU 2747      30.388  22.830  21.575  1.00 25.07
ATOM   18308  CA  LEU 2747      28.988  23.244  21.501  1.00 24.80
ATOM   18309  CB  LEU 2747      28.220  22.325  20.539  1.00 24.87
ATOM   18310  CG  LEU 2747      28.127  20.828  20.860  1.00 26.63
ATOM   18311  CD1 LEU 2747      26.966  20.567  21.816  1.00 25.96
ATOM   18312  CD2 LEU 2747      27.912  20.050  19.564  1.00 25.74
ATOM   18313  C   LEU 2747      28.343  23.215  22.887  1.00 22.90
ATOM   18314  O   LEU 2747      27.315  23.851  23.122  1.00 22.29
ATOM   18315  N   GLY 2748      28.952  22.473  23.805  1.00 22.88
ATOM   18316  CA  GLY 2748      28.414  22.396  25.151  1.00 25.99
ATOM   18317  C   GLY 2748      28.449  23.744  25.842  1.00 27.51
ATOM   18318  O   GLY 2748      27.725  23.975  26.810  1.00 27.90
ATOM   18319  N   MET 2749      29.291  24.641  25.342  1.00 29.54
ATOM   18320  CA  MET 2749      29.411  25.970  25.930  1.00 30.31
ATOM   18321  CB  MET 2749      30.884  26.294  26.194  1.00 32.91
ATOM   18322  CG  MET 2749      31.546  25.370  27.208  1.00 35.18
ATOM   18323  SD  MET 2749      33.294  25.754  27.464  1.00 42.41
ATOM   18324  CE  MET 2749      33.162  27.152  28.569  1.00 40.70
ATOM   18325  C   MET 2749      28.798  27.044  25.042  1.00 29.17
ATOM   18326  O   MET 2749      28.003  27.863  25.500  1.00 30.78
ATOM   18327  N   THR 2750      29.162  27.029  23.767  1.00 28.64
ATOM   18328  CA  THR 2750      28.662  28.016  22.827  1.00 28.34
ATOM   18329  CB  THR 2750      29.546  28.057  21.570  1.00 29.53
ATOM   18330  OG1 THR 2750      29.124  29.130  20.718  1.00 33.35
ATOM   18331  CG2 THR 2750      29.450  26.744  20.816  1.00 29.90
ATOM   18332  C   THR 2750      27.213  27.787  22.409  1.00 27.81
ATOM   18333  O   THR 2750      26.495  28.731  22.073  1.00 27.33
ATOM   18334  N   VAL 2751      26.779  26.533  22.425  1.00 27.07
ATOM   18335  CA  VAL 2751      25.411  26.220  22.033  1.00 26.65
ATOM   18336  CB  VAL 2751      25.380  25.004  21.076  1.00 27.34
ATOM   18337  CG1 VAL 2751      23.945  24.661  20.717  1.00 25.72
ATOM   18338  CG2 VAL 2751      26.182  25.316  19.817  1.00 27.61
ATOM   18339  C   VAL 2751      24.508  25.940  23.231  1.00 25.59
ATOM   18340  O   VAL 2751      23.459  26.565  23.380  1.00 25.62
ATOM   18341  N   GLN 2752      24.924  25.008  24.085  1.00 25.08
ATOM   18342  CA  GLN 2752      24.140  24.633  25.261  1.00 25.15
ATOM   18343  CB  GLN 2752      24.556  23.237  25.735  1.00 25.01
ATOM   18344  CG  GLN 2752      24.136  22.122  24.776  1.00 21.90
ATOM   18345  CD  GLN 2752      24.763  20.776  25.103  1.00 19.31
ATOM   18346  OE1 GLN 2752      25.425  20.616  26.126  1.00 20.25
ATOM   18347  NE2 GLN 2752      24.563  19.802  24.223  1.00 16.51
ATOM   18348  C   GLN 2752      24.248  25.637  26.406  1.00 27.38
ATOM   18349  O   GLN 2752      23.303  25.818  27.179  1.00 26.43
ATOM   18350  N   GLY 2753      25.401  26.286  26.522  1.00 27.57
ATOM   18351  CA  GLY 2753      25.577  27.273  27.574  1.00 29.69
ATOM   18352  C   GLY 2753      26.144  26.765  28.886  1.00 30.82
ATOM   18353  O   GLY 2753      25.954  27.394  29.928  1.00 30.56
ATOM   18354  N   HIS 2754      26.836  25.631  28.842  1.00 30.11
```

```
ATOM   18355  CA   HIS  2754     27.448  25.063  30.036  1.00 32.21
ATOM   18356  CB   HIS  2754     27.639  23.557  29.877  1.00 33.27
ATOM   18357  CG   HIS  2754     26.359  22.794  29.763  1.00 34.86
ATOM   18358  CD2  HIS  2754     25.852  22.052  28.751  1.00 34.88
ATOM   18359  ND1  HIS  2754     25.433  22.735  30.783  1.00 35.48
ATOM   18360  CE1  HIS  2754     24.411  21.988  30.404  1.00 35.76
ATOM   18361  NE2  HIS  2754     24.641  21.562  29.175  1.00 35.21
ATOM   18362  C    HIS  2754     28.808  25.721  30.258  1.00 33.24
ATOM   18363  O    HIS  2754     29.329  26.392  29.365  1.00 31.50
ATOM   18364  N    ASP  2755     29.381  25.511  31.442  1.00 34.08
ATOM   18365  CA   ASP  2755     30.678  26.084  31.795  1.00 35.48
ATOM   18366  CB   ASP  2755     30.789  26.256  33.319  1.00 38.54
ATOM   18367  CG   ASP  2755     30.687  24.941  34.070  1.00 40.66
ATOM   18368  OD1  ASP  2755     31.598  24.093  33.934  1.00 44.22
ATOM   18369  OD2  ASP  2755     29.694  24.749  34.805  1.00 43.84
ATOM   18370  C    ASP  2755     31.841  25.240  31.285  1.00 35.23
ATOM   18371  O    ASP  2755     32.999  25.650  31.363  1.00 36.04
ATOM   18372  N    SER  2756     31.531  24.055  30.770  1.00 33.43
ATOM   18373  CA   SER  2756     32.550  23.161  30.239  1.00 31.37
ATOM   18374  CB   SER  2756     33.111  22.252  31.339  1.00 29.97
ATOM   18375  OG   SER  2756     32.155  21.301  31.769  1.00 28.60
ATOM   18376  C    SER  2756     31.929  22.316  29.134  1.00 30.66
ATOM   18377  O    SER  2756     30.767  22.506  28.776  1.00 29.90
ATOM   18378  N    THR  2757     32.708  21.382  28.601  1.00 30.30
ATOM   18379  CA   THR  2757     32.236  20.520  27.526  1.00 29.72
ATOM   18380  CB   THR  2757     33.296  20.404  26.415  1.00 29.31
ATOM   18381  OG1  THR  2757     34.491  19.832  26.957  1.00 27.82
ATOM   18382  CG2  THR  2757     33.615  21.773  25.831  1.00 29.02
ATOM   18383  C    THR  2757     31.889  19.109  28.009  1.00 29.19
ATOM   18384  O    THR  2757     31.433  18.275  27.227  1.00 28.12
ATOM   18385  N    LEU  2758     32.107  18.842  29.293  1.00 28.20
ATOM   18386  CA   LEU  2758     31.824  17.519  29.849  1.00 27.55
ATOM   18387  CB   LEU  2758     32.241  17.453  31.322  1.00 28.03
ATOM   18388  CG   LEU  2758     33.689  17.047  31.630  1.00 29.70
ATOM   18389  CD1  LEU  2758     34.658  18.019  30.978  1.00 30.55
ATOM   18390  CD2  LEU  2758     33.895  17.011  33.135  1.00 30.83
ATOM   18391  C    LEU  2758     30.367  17.072  29.716  1.00 26.67
ATOM   18392  O    LEU  2758     30.095  15.899  29.450  1.00 26.40
ATOM   18393  N    PRO  2759     29.412  17.993  29.908  1.00 26.39
ATOM   18394  CD   PRO  2759     29.559  19.394  30.346  1.00 28.12
ATOM   18395  CA   PRO  2759     27.995  17.626  29.795  1.00 26.06
ATOM   18396  CB   PRO  2759     27.269  18.895  30.250  1.00 28.18
ATOM   18397  CG   PRO  2759     28.250  19.993  29.929  1.00 27.99
ATOM   18398  C    PRO  2759     27.560  17.161  28.401  1.00 25.95
ATOM   18399  O    PRO  2759     26.499  16.557  28.244  1.00 24.22
ATOM   18400  N    VAL  2760     28.378  17.435  27.389  1.00 24.76
ATOM   18401  CA   VAL  2760     28.045  17.037  26.022  1.00 23.60
ATOM   18402  CB   VAL  2760     28.999  17.697  24.999  1.00 23.62
ATOM   18403  CG1  VAL  2760     28.613  17.292  23.592  1.00 23.23
ATOM   18404  CG2  VAL  2760     28.949  19.204  25.135  1.00 24.42
ATOM   18405  C    VAL  2760     28.120  15.528  25.853  1.00 21.28
ATOM   18406  O    VAL  2760     29.142  14.912  26.145  1.00 21.37
ATOM   18407  N    THR  2761     27.041  14.914  25.381  1.00 21.58
ATOM   18408  CA   THR  2761     27.096  13.475  25.205  1.00 22.07
ATOM   18409  CB   THR  2761     26.038  12.765  26.109  1.00 25.74
ATOM   18410  OG1  THR  2761     25.041  13.706  26.540  1.00 27.70
ATOM   18411  CG2  THR  2761     26.713  12.205  27.362  1.00 29.26
ATOM   18412  C    THR  2761     27.007  13.062  23.731  1.00 20.47
ATOM   18413  O    THR  2761     26.850  13.907  22.851  1.00 18.18
ATOM   18414  N    VAL  2762     27.146  11.769  23.466  1.00 17.63
ATOM   18415  CA   VAL  2762     27.127  11.268  22.102  1.00 18.14
ATOM   18416  CB   VAL  2762     27.260   9.724  22.092  1.00 16.98
ATOM   18417  CG1  VAL  2762     27.180   9.186  20.676  1.00 18.56
ATOM   18418  CG2  VAL  2762     28.601   9.330  22.709  1.00 17.91
ATOM   18419  C    VAL  2762     25.884  11.699  21.335  1.00 17.74
ATOM   18420  O    VAL  2762     25.986  12.166  20.204  1.00 20.33
ATOM   18421  N    ALA  2763     24.714  11.555  21.950  1.00 16.50
ATOM   18422  CA   ALA  2763     23.461  11.939  21.308  1.00 16.78
ATOM   18423  CB   ALA  2763     22.291  11.727  22.274  1.00 17.39
ATOM   18424  C    ALA  2763     23.475  13.387  20.814  1.00 16.99
ATOM   18425  O    ALA  2763     22.967  13.679  19.732  1.00 16.49
ATOM   18426  N    ASP  2764     24.049  14.289  21.607  1.00 16.36
ATOM   18427  CA   ASP  2764     24.118  15.696  21.228  1.00 17.12
ATOM   18428  CB   ASP  2764     24.719  16.544  22.355  1.00 16.73
ATOM   18429  CG   ASP  2764     23.886  16.518  23.622  1.00 18.74
ATOM   18430  OD1  ASP  2764     22.638  16.468  23.530  1.00 17.10
ATOM   18431  OD2  ASP  2764     24.482  16.570  24.718  1.00 18.91
```

```
ATOM   18432  C    ASP  2764      24.968  15.875  19.977  1.00 16.55
ATOM   18433  O    ASP  2764      24.617  16.642  19.084  1.00 15.59
ATOM   18434  N    ILE  2765      26.094  15.171  19.923  1.00 17.15
ATOM   18435  CA   ILE  2765      26.991  15.261  18.774  1.00 18.11
ATOM   18436  CB   ILE  2765      28.270  14.399  18.985  1.00 18.63
ATOM   18437  CG2  ILE  2765      29.151  14.452  17.740  1.00 19.14
ATOM   18438  CG1  ILE  2765      29.057  14.901  20.207  1.00 18.27
ATOM   18439  CD1  ILE  2765      29.657  16.300  20.041  1.00 20.11
ATOM   18440  C    ILE  2765      26.263  14.787  17.509  1.00 18.09
ATOM   18441  O    ILE  2765      26.328  15.432  16.461  1.00 17.25
ATOM   18442  N    ALA  2766      25.563  13.661  17.615  1.00 17.05
ATOM   18443  CA   ALA  2766      24.831  13.106  16.478  1.00 16.59
ATOM   18444  CB   ALA  2766      24.201  11.765  16.858  1.00 18.04
ATOM   18445  C    ALA  2766      23.749  14.060  15.983  1.00 16.20
ATOM   18446  O    ALA  2766      23.486  14.778  14.36  1.00 14.36
ATOM   18447  N    TYR  2767      23.099  14.737  16.921  1.00 15.60
ATOM   18448  CA   TYR  2767      22.048  15.682  16.578  1.00 17.66
ATOM   18449  CB   TYR  2767      21.439  16.269  17.853  1.00 17.15
ATOM   18450  CG   TYR  2767      20.432  17.370  17.611  1.00 18.50
ATOM   18451  CD1  TYR  2767      19.212  17.107  16.998  1.00 19.60
ATOM   18452  CE1  TYR  2767      18.269  18.113  16.811  1.00 19.55
ATOM   18453  CD2  TYR  2767      20.689  18.671  18.028  1.00 20.43
ATOM   18454  CE2  TYR  2767      19.754  19.684  17.845  1.00 17.99
ATOM   18455  CZ   TYR  2767      18.547  19.396  17.238  1.00 20.45
ATOM   18456  OH   TYR  2767      17.607  20.389  17.067  1.00 19.83
ATOM   18457  C    TYR  2767      22.612  16.812  15.715  1.00 18.01
ATOM   18458  O    TYR  2767      22.130  17.075  14.614  1.00 19.81
ATOM   18459  N    HIS  2768      23.639  17.482  16.220  1.00 19.41
ATOM   18460  CA   HIS  2768      24.239  18.581  15.479  1.00 18.71
ATOM   18461  CB   HIS  2768      25.205  19.354  16.387  1.00 18.01
ATOM   18462  CG   HIS  2768      24.513  20.100  17.490  1.00 19.91
ATOM   18463  CD2  HIS  2768      24.343  19.799  18.801  1.00 20.46
ATOM   18464  ND1  HIS  2768      23.816  21.271  17.275  1.00 19.52
ATOM   18465  CE1  HIS  2768      23.246  21.657  18.403  1.00 19.84
ATOM   18466  NE2  HIS  2768      23.549  20.782  19.344  1.00 19.32
ATOM   18467  C    HIS  2768      24.929  18.102  14.199  1.00 17.93
ATOM   18468  O    HIS  2768      24.916  18.802  13.185  1.00 17.64
ATOM   18469  N    THR  2769      25.508  16.904  14.234  1.00 17.47
ATOM   18470  CA   THR  2769      26.183  16.352  13.064  1.00 18.99
ATOM   18471  CB   THR  2769      26.810  14.970  13.381  1.00 19.01
ATOM   18472  OG1  THR  2769      27.915  15.147  14.269  1.00 19.38
ATOM   18473  CG2  THR  2769      27.295  14.277  12.109  1.00 19.98
ATOM   18474  C    THR  2769      25.207  16.216  11.894  1.00 19.84
ATOM   18475  O    THR  2769      25.539  16.554  10.759  1.00 20.75
ATOM   18476  N    ALA  2770      24.005  15.720  12.173  1.00 18.34
ATOM   18477  CA   ALA  2770      22.997  15.563  11.137  1.00 20.30
ATOM   18478  CB   ALA  2770      21.784  14.809  11.686  1.00 19.96
ATOM   18479  C    ALA  2770      22.562  16.923  10.586  1.00 19.65
ATOM   18480  O    ALA  2770      22.303  17.058   9.387  1.00 19.44
ATOM   18481  N    ALA  2771      22.481  17.931  11.453  1.00 19.52
ATOM   18482  CA   ALA  2771      22.083  19.265  11.010  1.00 19.17
ATOM   18483  CB   ALA  2771      21.887  20.199  12.213  1.00 18.60
ATOM   18484  C    ALA  2771      23.146  19.828  10.072  1.00 19.51
ATOM   18485  O    ALA  2771      22.833  20.325   8.993  1.00 20.21
ATOM   18486  N    VAL  2772      24.405  19.740  10.481  1.00 20.13
ATOM   18487  CA   VAL  2772      25.498  20.238   9.653  1.00 22.46
ATOM   18488  CB   VAL  2772      26.864  19.996  10.332  1.00 22.59
ATOM   18489  CG1  VAL  2772      27.998  20.293   9.355  1.00 22.59
ATOM   18490  CG2  VAL  2772      26.983  20.869  11.575  1.00 20.73
ATOM   18491  C    VAL  2772      25.485  19.544   8.291  1.00 23.49
ATOM   18492  O    VAL  2772      25.567  20.198   7.252  1.00 23.77
ATOM   18493  N    ARG  2773      25.375  18.219   8.307  1.00 23.50
ATOM   18494  CA   ARG  2773      25.352  17.435   7.079  1.00 23.91
ATOM   18495  CB   ARG  2773      25.182  15.949   7.402  1.00 23.75
ATOM   18496  CG   ARG  2773      25.032  15.065   6.181  1.00 24.41
ATOM   18497  CD   ARG  2773      26.215  15.217   5.241  1.00 25.43
ATOM   18498  NE   ARG  2773      27.458  14.746   5.840  1.00 25.65
ATOM   18499  CZ   ARG  2773      28.661  14.919   5.301  1.00 27.67
ATOM   18500  NH1  ARG  2773      28.787  15.560   4.147  1.00 27.55
ATOM   18501  NH2  ARG  2773      29.742  14.449   5.912  1.00 24.82
ATOM   18502  C    ARG  2773      24.260  17.873   6.107  1.00 23.35
ATOM   18503  O    ARG  2773      24.485  17.909   4.897  1.00 25.70
ATOM   18504  N    ARG  2774      23.081  18.198   6.626  1.00 23.07
ATOM   18505  CA   ARG  2774      21.979  18.639   5.777  1.00 24.60
ATOM   18506  CB   ARG  2774      20.698  18.814   6.597  1.00 24.60
ATOM   18507  CG   ARG  2774      20.163  17.532   7.217  1.00 25.89
ATOM   18508  CD   ARG  2774      18.759  17.730   7.780  1.00 27.00
```

```
ATOM   18509   NE   ARG   2774      18.237   16.502    8.381   1.00 26.44
ATOM   18510   CZ   ARG   2774      18.464   16.116    9.634   1.00 27.67
ATOM   18511   NH1  ARG   2774      19.203   16.862   10.445   1.00 26.75
ATOM   18512   NH2  ARG   2774      17.953   14.976   10.078   1.00 29.16
ATOM   18513   C    ARG   2774      22.329   19.962    5.107   1.00 26.29
ATOM   18514   O    ARG   2774      21.917   20.225    3.975   1.00 25.64
ATOM   18515   N    GLY   2775      23.095   20.786    5.818   1.00 26.82
ATOM   18516   CA   GLY   2775      23.491   22.081    5.295   1.00 29.16
ATOM   18517   C    GLY   2775      24.688   22.025    4.365   1.00 30.64
ATOM   18518   O    GLY   2775      24.869   22.911    3.528   1.00 30.02
ATOM   18519   N    ALA   2776      25.506   20.987    4.517   1.00 30.40
ATOM   18520   CA   ALA   2776      26.694   20.802    3.691   1.00 32.03
ATOM   18521   CB   ALA   2776      27.914   21.368    4.403   1.00 31.76
ATOM   18522   C    ALA   2776      26.900   19.315    3.404   1.00 32.26
ATOM   18523   O    ALA   2776      27.754   18.670    4.006   1.00 33.25
ATOM   18524   N    PRO   2777      26.118   18.753    2.470   1.00 32.99
ATOM   18525   CD   PRO   2777      25.068   19.418    1.678   1.00 33.32
ATOM   18526   CA   PRO   2777      26.215   17.335    2.109   1.00 33.05
ATOM   18527   CB   PRO   2777      25.007   17.135    1.202   1.00 34.47
ATOM   18528   CG   PRO   2777      24.886   18.461    0.526   1.00 34.66
ATOM   18529   C    PRO   2777      27.520   16.922    1.435   1.00 33.57
ATOM   18530   O    PRO   2777      27.824   15.734    1.349   1.00 31.96
ATOM   18531   N    ASN   2778      28.288   17.902    0.966   1.00 33.97
ATOM   18532   CA   ASN   2778      29.555   17.625    0.296   1.00 35.27
ATOM   18533   CB   ASN   2778      29.619   18.366   -1.046   1.00 36.46
ATOM   18534   CG   ASN   2778      28.554   17.909   -2.023   1.00 38.38
ATOM   18535   OD1  ASN   2778      28.532   16.752   -2.435   1.00 38.91
ATOM   18536   ND2  ASN   2778      27.661   18.822   -2.399   1.00 39.92
ATOM   18537   C    ASN   2778      30.768   18.023    1.139   1.00 34.56
ATOM   18538   O    ASN   2778      31.884   18.090    0.629   1.00 35.51
ATOM   18539   N    CYS   2779      30.558   18.284    2.425   1.00 32.91
ATOM   18540   CA   CYS   2779      31.664   18.683    3.285   1.00 31.31
ATOM   18541   CB   CYS   2779      31.202   19.708    4.335   1.00 32.14
ATOM   18542   SG   CYS   2779      30.456   19.001    5.868   1.00 30.62
ATOM   18543   C    CYS   2779      32.287   17.497    4.006   1.00 31.79
ATOM   18544   O    CYS   2779      31.665   16.444    4.151   1.00 31.60
ATOM   18545   N    LEU   2780      33.531   17.673    4.436   1.00 30.11
ATOM   18546   CA   LEU   2780      34.231   16.647    5.191   1.00 29.59
ATOM   18547   CB   LEU   2780      35.744   16.787    5.018   1.00 29.72
ATOM   18548   CG   LEU   2780      36.593   15.754    5.768   1.00 29.00
ATOM   18549   CD1  LEU   2780      36.280   14.356    5.241   1.00 29.73
ATOM   18550   CD2  LEU   2780      38.070   16.064    5.591   1.00 30.17
ATOM   18551   C    LEU   2780      33.841   16.958    6.632   1.00 29.34
ATOM   18552   O    LEU   2780      34.395   17.868    7.245   1.00 28.84
ATOM   18553   N    LEU   2781      32.883   16.204    7.160   1.00 27.59
ATOM   18554   CA   LEU   2781      32.384   16.422    8.509   1.00 25.37
ATOM   18555   CB   LEU   2781      30.891   16.063    8.558   1.00 24.75
ATOM   18556   CG   LEU   2781      29.977   16.721    9.604   1.00 23.53
ATOM   18557   CD1  LEU   2781      28.525   16.303    9.359   1.00 23.06
ATOM   18558   CD2  LEU   2781      30.414   16.333   10.994   1.00 22.38
ATOM   18559   C    LEU   2781      33.149   15.643    9.584   1.00 25.37
ATOM   18560   O    LEU   2781      33.200   14.415    9.563   1.00 23.46
ATOM   18561   N    LEU   2782      33.758   16.372   10.514   1.00 26.91
ATOM   18562   CA   LEU   2782      34.488   15.760   11.617   1.00 26.65
ATOM   18563   CB   LEU   2782      35.891   16.349   11.738   1.00 29.44
ATOM   18564   CG   LEU   2782      36.940   15.866   10.736   1.00 31.77
ATOM   18565   CD1  LEU   2782      36.836   16.642    9.435   1.00 32.73
ATOM   18566   CD2  LEU   2782      38.316   16.046   11.354   1.00 34.44
ATOM   18567   C    LEU   2782      33.729   16.016   12.913   1.00 26.25
ATOM   18568   O    LEU   2782      33.362   17.152   13.208   1.00 26.93
ATOM   18569   N    ALA   2783      33.495   14.966   13.692   1.00 25.81
ATOM   18570   CA   ALA   2783      32.775   15.116   14.953   1.00 26.30
ATOM   18571   CB   ALA   2783      31.397   14.481   14.843   1.00 25.81
ATOM   18572   C    ALA   2783      33.555   14.483   16.096   1.00 23.83
ATOM   18573   O    ALA   2783      34.175   13.439   15.921   1.00 23.35
ATOM   18574   N    ASP   2784      33.532   15.112   17.267   1.00 24.55
ATOM   18575   CA   ASP   2784      34.258   14.565   18.409   1.00 24.44
ATOM   18576   CB   ASP   2784      34.644   15.649   19.420   1.00 29.43
ATOM   18577   CG   ASP   2784      35.301   16.852   18.787   1.00 30.77
ATOM   18578   OD1  ASP   2784      35.870   16.717   17.687   1.00 34.29
ATOM   18579   OD2  ASP   2784      35.253   17.929   19.416   1.00 32.28
ATOM   18580   C    ASP   2784      33.445   13.549   19.184   1.00 22.89
ATOM   18581   O    ASP   2784      32.213   13.581   19.176   1.00 22.27
ATOM   18582   N    LEU   2785      34.151   12.641   19.843   1.00 22.16
ATOM   18583   CA   LEU   2785      33.506   11.683   20.718   1.00 21.83
ATOM   18584   CB   LEU   2785      34.278   10.367   20.788   1.00 21.35
ATOM   18585   CG   LEU   2785      34.145    9.458   19.559   1.00 21.98
```

```
ATOM   18586   CD1  LEU   2785       34.687    8.077   19.896   1.00  22.46
ATOM   18587   CD2  LEU   2785       32.680    9.356   19.147   1.00  22.46
ATOM   18588   C    LEU   2785       33.629   12.440   22.032   1.00  23.06
ATOM   18589   O    LEU   2785       34.738   12.760   22.472   1.00  25.15
ATOM   18590   N    PRO   2786       32.495   12.771   22.658   1.00  22.63
ATOM   18591   CD   PRO   2786       31.134   12.348   22.285   1.00  22.73
ATOM   18592   CA   PRO   2786       32.483   13.509   23.925   1.00  22.23
ATOM   18593   CB   PRO   2786       30.993   13.690   24.200   1.00  22.61
ATOM   18594   CG   PRO   2786       30.400   12.444   23.604   1.00  24.03
ATOM   18595   C    PRO   2786       33.201   12.840   25.084   1.00  22.35
ATOM   18596   O    PRO   2786       33.774   11.761   24.945   1.00  23.47
ATOM   18597   N    PHE   2787       33.157   13.511   26.232   1.00  23.08
ATOM   18598   CA   PHE   2787       33.771   13.036   27.464   1.00  21.93
ATOM   18599   CB   PHE   2787       33.378   13.979   28.609   1.00  24.24
ATOM   18600   CG   PHE   2787       33.721   13.461   29.974   1.00  25.46
ATOM   18601   CD1  PHE   2787       35.047   13.282   30.355   1.00  28.52
ATOM   18602   CD2  PHE   2787       32.714   13.151   30.885   1.00  29.32
ATOM   18603   CE1  PHE   2787       35.368   12.802   31.624   1.00  29.53
ATOM   18604   CE2  PHE   2787       33.023   12.671   32.157   1.00  30.35
ATOM   18605   CZ   PHE   2787       34.356   12.496   32.529   1.00  31.34
ATOM   18606   C    PHE   2787       33.359   11.598   27.800   1.00  20.61
ATOM   18607   O    PHE   2787       32.174   11.260   27.788   1.00  21.01
ATOM   18608   N    MET   2788       34.354   10.766   28.091   1.00  17.86
ATOM   18609   CA   MET   2788       34.156    9.364   28.452   1.00  20.41
ATOM   18610   CB   MET   2788       33.417    9.269   29.793   1.00  21.52
ATOM   18611   CG   MET   2788       33.645    7.961   30.546   1.00  24.11
ATOM   18612   SD   MET   2788       35.397    7.699   30.917   1.00  25.02
ATOM   18613   CE   MET   2788       35.761    9.174   31.844   1.00  27.40
ATOM   18614   C    MET   2788       33.405    8.555   27.396   1.00  19.70
ATOM   18615   O    MET   2788       32.811    7.516   27.705   1.00  22.61
ATOM   18616   N    ALA   2789       33.430    9.020   26.152   1.00  19.87
ATOM   18617   CA   ALA   2789       32.736    8.321   25.069   1.00  18.87
ATOM   18618   CB   ALA   2789       32.236    9.326   24.036   1.00  19.03
ATOM   18619   C    ALA   2789       33.627    7.287   24.400   1.00  19.61
ATOM   18620   O    ALA   2789       33.190    6.566   23.502   1.00  18.35
ATOM   18621   N    TYR   2790       34.880    7.213   24.832   1.00  19.23
ATOM   18622   CA   TYR   2790       35.813    6.250   24.257   1.00  20.39
ATOM   18623   CB   TYR   2790       36.632    6.911   23.146   1.00  21.61
ATOM   18624   CG   TYR   2790       37.208    8.255   23.518   1.00  21.98
ATOM   18625   CD1  TYR   2790       38.509    8.373   24.012   1.00  24.51
ATOM   18626   CE1  TYR   2790       39.039    9.625   24.362   1.00  26.09
ATOM   18627   CD2  TYR   2790       36.445    9.413   23.385   1.00  22.55
ATOM   18628   CE2  TYR   2790       36.958   10.661   23.731   1.00  25.20
ATOM   18629   CZ   TYR   2790       38.252   10.760   24.216   1.00  26.07
ATOM   18630   OH   TYR   2790       38.752   12.006   24.538   1.00  28.26
ATOM   18631   C    TYR   2790       36.720    5.685   25.331   1.00  21.20
ATOM   18632   O    TYR   2790       37.905    5.452   25.099   1.00  20.79
ATOM   18633   N    ALA   2791       36.136    5.443   26.501   1.00  20.62
ATOM   18634   CA   ALA   2791       36.863    4.902   27.649   1.00  22.09
ATOM   18635   CB   ALA   2791       35.957    4.894   28.876   1.00  23.98
ATOM   18636   C    ALA   2791       37.401    3.496   27.383   1.00  21.97
ATOM   18637   O    ALA   2791       38.381    3.075   27.994   1.00  22.52
ATOM   18638   N    THR   2792       36.740    2.766   26.491   1.00  20.00
ATOM   18639   CA   THR   2792       37.186    1.431   26.123   1.00  20.70
ATOM   18640   CB   THR   2792       36.348    0.313   26.786   1.00  21.59
ATOM   18641   OG1  THR   2792       35.030    0.310   26.220   1.00  23.40
ATOM   18642   CG2  THR   2792       36.250    0.532   28.297   1.00  20.98
ATOM   18643   C    THR   2792       36.999    1.325   24.616   1.00  21.35
ATOM   18644   O    THR   2792       36.128    1.980   24.052   1.00  19.07
ATOM   18645   N    PRO   2793       37.824    0.510   23.945   1.00  21.50
ATOM   18646   CD   PRO   2793       38.961   -0.267   24.471   1.00  22.59
ATOM   18647   CA   PRO   2793       37.711    0.348   22.494   1.00  22.71
ATOM   18648   CB   PRO   2793       38.738   -0.737   22.197   1.00  23.86
ATOM   18649   CG   PRO   2793       39.806   -0.458   23.233   1.00  24.23
ATOM   18650   C    PRO   2793       36.290   -0.051   22.097   1.00  21.79
ATOM   18651   O    PRO   2793       35.740    0.462   21.124   1.00  20.91
ATOM   18652   N    GLU   2794       35.694   -0.954   22.867   1.00  22.08
ATOM   18653   CA   GLU   2794       34.341   -1.412   22.588   1.00  22.74
ATOM   18654   CB   GLU   2794       33.932   -2.482   23.603   1.00  26.70
ATOM   18655   CG   GLU   2794       32.778   -3.362   23.157   1.00  32.07
ATOM   18656   CD   GLU   2794       32.483   -4.484   24.143   1.00  37.26
ATOM   18657   OE1  GLU   2794       32.076   -4.182   25.291   1.00  38.96
ATOM   18658   OE2  GLU   2794       32.659   -5.669   23.771   1.00  39.39
ATOM   18659   C    GLU   2794       33.367   -0.231   22.628   1.00  21.49
ATOM   18660   O    GLU   2794       32.536   -0.073   21.734   1.00  18.66
ATOM   18661   N    GLN   2795       33.465    0.609   23.652   1.00  19.76
ATOM   18662   CA   GLN   2795       32.574    1.758   23.728   1.00  19.97
```

```
ATOM   18663  CB   GLN  2795      32.708    2.444   25.086  1.00 23.38
ATOM   18664  CG   GLN  2795      32.276    1.563   26.239  1.00 30.06
ATOM   18665  CD   GLN  2795      32.302    2.296   27.555  1.00 33.76
ATOM   18666  OE1  GLN  2795      31.557    3.257   27.755  1.00 37.23
ATOM   18667  NE2  GLN  2795      33.164    1.854   28.463  1.00 37.36
ATOM   18668  C    GLN  2795      32.883    2.738   22.602  1.00 18.75
ATOM   18669  O    GLN  2795      31.979    3.379   22.055  1.00 16.21
ATOM   18670  N    ALA  2796      34.160    2.853   22.251  1.00 17.68
ATOM   18671  CA   ALA  2796      34.561    3.740   21.161  1.00 16.76
ATOM   18672  CB   ALA  2796      36.077    3.731   21.019  1.00 17.78
ATOM   18673  C    ALA  2796      33.909    3.306   19.844  1.00 15.71
ATOM   18674  O    ALA  2796      33.408    4.146   19.097  1.00 13.16
ATOM   18675  N    PHE  2797      33.897    2.002   19.567  1.00 16.19
ATOM   18676  CA   PHE  2797      33.302    1.508   18.319  1.00 16.66
ATOM   18677  CB   PHE  2797      33.374   -0.023   18.233  1.00 15.73
ATOM   18678  CG   PHE  2797      34.749   -0.596   18.450  1.00 19.24
ATOM   18679  CD1  PHE  2797      35.882    0.081   18.013  1.00 17.94
ATOM   18680  CD2  PHE  2797      34.907   -1.823   19.088  1.00 17.33
ATOM   18681  CE1  PHE  2797      37.153   -0.453   18.212  1.00 20.94
ATOM   18682  CE2  PHE  2797      36.175   -2.369   19.293  1.00 20.14
ATOM   18683  CZ   PHE  2797      37.299   -1.678   18.853  1.00 18.91
ATOM   18684  C    PHE  2797      31.840    1.925   18.221  1.00 15.33
ATOM   18685  O    PHE  2797      31.398    2.438   17.197  1.00 14.05
ATOM   18686  N    GLU  2798      31.105    1.688   19.305  1.00 17.31
ATOM   18687  CA   GLU  2798      29.687    2.015   19.392  1.00 18.59
ATOM   18688  CB   GLU  2798      29.139    1.537   20.741  1.00 23.40
ATOM   18689  CG   GLU  2798      27.645    1.743   20.953  1.00 27.48
ATOM   18690  CD   GLU  2798      26.801    0.925   19.996  1.00 31.32
ATOM   18691  OE1  GLU  2798      27.266   -0.155   19.566  1.00 34.20
ATOM   18692  OE2  GLU  2798      25.667    1.353   19.685  1.00 34.45
ATOM   18693  C    GLU  2798      29.379    3.507   19.220  1.00 17.82
ATOM   18694  O    GLU  2798      28.510    3.882   18.432  1.00 16.21
ATOM   18695  N    ASN  2799      30.082    4.363   19.956  1.00 17.26
ATOM   18696  CA   ASN  2799      29.808    5.790   19.863  1.00 16.33
ATOM   18697  CB   ASN  2799      30.402    6.521   21.069  1.00 17.15
ATOM   18698  CG   ASN  2799      29.710    6.125   22.369  1.00 20.67
ATOM   18699  OD1  ASN  2799      28.495    5.923   22.388  1.00 17.99
ATOM   18700  ND2  ASN  2799      30.474    6.017   23.455  1.00 17.98
ATOM   18701  C    ASN  2799      30.267    6.411   18.553  1.00 15.61
ATOM   18702  O    ASN  2799      29.615    7.313   18.031  1.00 15.62
ATOM   18703  N    ALA  2800      31.379    5.915   18.019  1.00 16.20
ATOM   18704  CA   ALA  2800      31.891    6.395   16.748  1.00 16.55
ATOM   18705  CB   ALA  2800      33.233    5.752   16.443  1.00 14.64
ATOM   18706  C    ALA  2800      30.885    6.050   15.653  1.00 16.73
ATOM   18707  O    ALA  2800      30.570    6.877   14.792  1.00 17.09
ATOM   18708  N    ALA  2801      30.375    4.825   15.678  1.00 16.50
ATOM   18709  CA   ALA  2801      29.413    4.412   14.663  1.00 16.96
ATOM   18710  CB   ALA  2801      29.023    2.953   14.865  1.00 17.94
ATOM   18711  C    ALA  2801      28.180    5.306   14.726  1.00 15.19
ATOM   18712  O    ALA  2801      27.618    5.662   13.696  1.00 17.52
ATOM   18713  N    THR  2802      27.765    5.679   15.934  1.00 16.31
ATOM   18714  CA   THR  2802      26.596    6.528   16.082  1.00 15.68
ATOM   18715  CB   THR  2802      26.265    6.808   17.572  1.00 16.35
ATOM   18716  OG1  THR  2802      25.995    5.577   18.252  1.00 14.35
ATOM   18717  CG2  THR  2802      25.041    7.713   17.681  1.00 14.96
ATOM   18718  C    THR  2802      26.778    7.869   15.369  1.00 16.13
ATOM   18719  O    THR  2802      25.895    8.318   14.636  1.00 17.22
ATOM   18720  N    VAL  2803      27.921    8.509   15.580  1.00 16.63
ATOM   18721  CA   VAL  2803      28.186    9.798   14.956  1.00 17.54
ATOM   18722  CB   VAL  2803      29.380   10.502   15.644  1.00 18.75
ATOM   18723  CG1  VAL  2803      29.719   11.786   14.915  1.00 23.96
ATOM   18724  CG2  VAL  2803      29.023   10.813   17.098  1.00 20.56
ATOM   18725  C    VAL  2803      28.449    9.669   13.458  1.00 16.45
ATOM   18726  O    VAL  2803      28.126   10.574   12.684  1.00 18.21
ATOM   18727  N    MET  2804      29.029    8.547   13.051  1.00 16.81
ATOM   18728  CA   MET  2804      29.303    8.304   11.639  1.00 17.14
ATOM   18729  CB   MET  2804      30.229    7.093   11.480  1.00 18.19
ATOM   18730  CG   MET  2804      31.654    7.295   11.995  1.00 22.52
ATOM   18731  SD   MET  2804      32.594    8.461   10.990  1.00 24.27
ATOM   18732  CE   MET  2804      32.659    7.556    9.422  1.00 20.51
ATOM   18733  C    MET  2804      27.984    8.063   10.903  1.00 16.01
ATOM   18734  O    MET  2804      27.761    8.618    9.824  1.00 15.88
ATOM   18735  N    ARG  2805      27.101    7.248   11.481  1.00 15.73
ATOM   18736  CA   ARG  2805      25.822    6.986   10.831  1.00 15.34
ATOM   18737  CB   ARG  2805      25.011    5.925   11.596  1.00 13.01
ATOM   18738  CG   ARG  2805      25.647    4.539   11.632  1.00 16.75
ATOM   18739  CD   ARG  2805      24.645    3.460   12.060  1.00 13.35
```

```
ATOM   18740   NE   ARG   2805      25.314    2.212   12.432   1.00  18.35
ATOM   18741   CZ   ARG   2805      25.762    1.941   13.652   1.00  16.28
ATOM   18742   NH1  ARG   2805      25.609    2.829   14.630   1.00  18.45
ATOM   18743   NH2  ARG   2805      26.369    0.789   13.894   1.00  17.59
ATOM   18744   C    ARG   2805      24.999    8.268   10.718   1.00  15.55
ATOM   18745   O    ARG   2805      24.179    8.404    9.817   1.00  14.99
ATOM   18746   N    ALA   2806      25.232    9.207   11.633   1.00  16.80
ATOM   18747   CA   ALA   2806      24.502   10.473   11.639   1.00  16.91
ATOM   18748   CB   ALA   2806      24.548   11.095   13.030   1.00  16.95
ATOM   18749   C    ALA   2806      24.997   11.483   10.602   1.00  18.90
ATOM   18750   O    ALA   2806      24.425   12.567   10.466   1.00  16.85
ATOM   18751   N    GLY   2807      26.062   11.144    9.880   1.00  17.86
ATOM   18752   CA   GLY   2807      26.555   12.055    8.862   1.00  20.83
ATOM   18753   C    GLY   2807      28.042   12.344    8.866   1.00  19.96
ATOM   18754   O    GLY   2807      28.583   12.841    7.873   1.00  20.33
ATOM   18755   N    ALA   2808      28.706   12.039    9.976   1.00  20.84
ATOM   18756   CA   ALA   2808      30.141   12.279   10.094   1.00  20.51
ATOM   18757   CB   ALA   2808      30.596   12.030   11.532   1.00  21.43
ATOM   18758   C    ALA   2808      30.983   11.433    9.140   1.00  22.32
ATOM   18759   O    ALA   2808      30.583   10.340    8.734   1.00  22.72
ATOM   18760   N    ASN   2809      32.154   11.954    8.783   1.00  21.83
ATOM   18761   CA   ASN   2809      33.076   11.252    7.895   1.00  23.00
ATOM   18762   CB   ASN   2809      33.563   12.161    6.756   1.00  23.04
ATOM   18763   CG   ASN   2809      32.454   12.563    5.813   1.00  22.97
ATOM   18764   OD1  ASN   2809      31.720   11.715    5.303   1.00  26.20
ATOM   18765   ND2  ASN   2809      32.329   13.856    5.567   1.00  24.82
ATOM   18766   C    ASN   2809      34.281   10.828    8.713   1.00  23.50
ATOM   18767   O    ASN   2809      34.991    9.885    8.365   1.00  22.98
ATOM   18768   N    MET   2810      34.503   11.531    9.815   1.00  23.62
ATOM   18769   CA   MET   2810      35.642   11.247   10.669   1.00  23.93
ATOM   18770   CB   MET   2810      36.853   12.052   10.181   1.00  25.09
ATOM   18771   CG   MET   2810      38.126   11.879   10.995   1.00  24.78
ATOM   18772   SD   MET   2810      39.481   12.847   10.255   1.00  28.00
ATOM   18773   CE   MET   2810      40.353   11.582    9.303   1.00  27.11
ATOM   18774   C    MET   2810      35.318   11.602   12.112   1.00  22.92
ATOM   18775   O    MET   2810      34.490   12.469   12.377   1.00  22.76
ATOM   18776   N    VAL   2811      35.972   10.912   13.037   1.00  21.54
ATOM   18777   CA   VAL   2811      35.767   11.144   14.452   1.00  22.27
ATOM   18778   CB   VAL   2811      35.345    9.840   15.156   1.00  22.64
ATOM   18779   CG1  VAL   2811      35.310   10.042   16.639   1.00  27.23
ATOM   18780   CG2  VAL   2811      33.972    9.399   14.652   1.00  23.31
ATOM   18781   C    VAL   2811      37.052   11.665   15.092   1.00  21.34
ATOM   18782   O    VAL   2811      38.151   11.238   14.729   1.00  20.30
ATOM   18783   N    LYS   2812      36.912   12.593   16.037   1.00  21.70
ATOM   18784   CA   LYS   2812      38.066   13.153   16.737   1.00  21.55
ATOM   18785   CB   LYS   2812      38.114   14.679   16.577   1.00  20.79
ATOM   18786   CG   LYS   2812      39.283   15.330   17.324   1.00  22.48
ATOM   18787   CD   LYS   2812      39.567   16.749   16.830   1.00  21.07
ATOM   18788   CE   LYS   2812      38.508   17.730   17.295   1.00  21.59
ATOM   18789   NZ   LYS   2812      38.526   17.887   18.777   1.00  19.95
ATOM   18790   C    LYS   2812      38.027   12.803   18.216   1.00  21.09
ATOM   18791   O    LYS   2812      37.000   12.967   18.873   1.00  20.83
ATOM   18792   N    ILE   2813      39.151   12.311   18.729   1.00  23.63
ATOM   18793   CA   ILE   2813      39.271   11.941   20.138   1.00  25.12
ATOM   18794   CB   ILE   2813      39.341   10.403   20.318   1.00  26.14
ATOM   18795   CG2  ILE   2813      38.018    9.763   19.878   1.00  25.11
ATOM   18796   CG1  ILE   2813      40.495    9.829   19.499   1.00  27.05
ATOM   18797   CD1  ILE   2813      40.733    8.341   19.742   1.00  28.78
ATOM   18798   C    ILE   2813      40.542   12.560   20.735   1.00  27.72
ATOM   18799   O    ILE   2813      41.580   12.607   20.078   1.00  26.81
ATOM   18800   N    GLU   2814      40.454   13.028   21.978   1.00  29.43
ATOM   18801   CA   GLU   2814      41.591   13.651   22.650   1.00  32.04
ATOM   18802   CB   GLU   2814      41.106   14.813   23.522   1.00  34.21
ATOM   18803   CG   GLU   2814      40.144   15.750   22.806   1.00  39.30
ATOM   18804   CD   GLU   2814      39.764   16.966   23.636   1.00  41.47
ATOM   18805   OE1  GLU   2814      39.370   16.798   24.812   1.00  41.55
ATOM   18806   OE2  GLU   2814      39.852   18.093   23.105   1.00  44.11
ATOM   18807   C    GLU   2814      42.364   12.655   23.509   1.00  31.92
ATOM   18808   O    GLU   2814      41.779   11.914   24.296   1.00  33.22
ATOM   18809   N    GLY   2815      43.684   12.641   23.354   1.00  30.77
ATOM   18810   CA   GLY   2815      44.506   11.729   24.126   1.00  30.34
ATOM   18811   C    GLY   2815      45.801   11.392   23.415   1.00  31.29
ATOM   18812   O    GLY   2815      45.975   11.705   22.234   1.00  30.87
ATOM   18813   N    GLY   2816      46.715   10.748   24.134   1.00  31.99
ATOM   18814   CA   GLY   2816      47.992   10.387   23.547   1.00  33.07
ATOM   18815   C    GLY   2816      48.172    8.903   23.294   1.00  34.28
ATOM   18816   O    GLY   2816      47.325    8.261   22.675   1.00  34.33
```

```
ATOM   18817  N    GLU  2817      49.285   8.364  23.783  1.00 34.03
ATOM   18818  CA   GLU  2817      49.631   6.956  23.615  1.00 34.66
ATOM   18819  CB   GLU  2817      50.925   6.647  24.376  1.00 37.31
ATOM   18820  CG   GLU  2817      52.196   7.025  23.634  1.00 40.46
ATOM   18821  CD   GLU  2817      52.586   5.990  22.591  1.00 42.88
ATOM   18822  OE1  GLU  2817      51.711   5.590  21.793  1.00 44.37
ATOM   18823  OE2  GLU  2817      53.767   5.582  22.567  1.00 42.78
ATOM   18824  C    GLU  2817      48.569   5.946  24.032  1.00 33.69
ATOM   18825  O    GLU  2817      48.395   4.923  23.369  1.00 34.29
ATOM   18826  N    TRP  2818      47.866   6.220  25.127  1.00 32.46
ATOM   18827  CA   TRP  2818      46.855   5.290  25.613  1.00 30.43
ATOM   18828  CB   TRP  2818      46.254   5.779  26.942  1.00 30.40
ATOM   18829  CG   TRP  2818      45.293   6.930  26.822  1.00 29.06
ATOM   18830  CD2  TRP  2818      43.862   6.850  26.831  1.00 28.87
ATOM   18831  CE2  TRP  2818      43.367   8.166  26.698  1.00 28.69
ATOM   18832  CE3  TRP  2818      42.950   5.791  26.941  1.00 27.56
ATOM   18833  CD1  TRP  2818      45.601   8.252  26.684  1.00 30.79
ATOM   18834  NE1  TRP  2818      44.448   9.005  26.609  1.00 30.25
ATOM   18835  CZ2  TRP  2818      41.997   8.451  26.667  1.00 27.27
ATOM   18836  CZ3  TRP  2818      41.590   6.074  26.910  1.00 27.33
ATOM   18837  CH2  TRP  2818      41.127   7.399  26.776  1.00 27.02
ATOM   18838  C    TRP  2818      45.737   5.048  24.604  1.00 28.89
ATOM   18839  O    TRP  2818      44.964   4.105  24.741  1.00 30.31
ATOM   18840  N    LEU  2819      45.656   5.892  23.585  1.00 27.35
ATOM   18841  CA   LEU  2819      44.616   5.744  22.579  1.00 26.42
ATOM   18842  CB   LEU  2819      44.132   7.118  22.115  1.00 26.77
ATOM   18843  CG   LEU  2819      43.245   7.896  23.085  1.00 28.13
ATOM   18844  CD1  LEU  2819      42.926   9.257  22.487  1.00 29.42
ATOM   18845  CD2  LEU  2819      41.969   7.121  23.358  1.00 29.42
ATOM   18846  C    LEU  2819      45.040   4.930  21.364  1.00 25.13
ATOM   18847  O    LEU  2819      44.218   4.647  20.497  1.00 21.39
ATOM   18848  N    VAL  2820      46.315   4.550  21.297  1.00 24.43
ATOM   18849  CA   VAL  2820      46.814   3.783  20.155  1.00 26.56
ATOM   18850  CB   VAL  2820      48.258   3.281  20.395  1.00 26.68
ATOM   18851  CG1  VAL  2820      48.671   2.330  19.282  1.00 27.02
ATOM   18852  CG2  VAL  2820      49.210   4.461  20.446  1.00 28.43
ATOM   18853  C    VAL  2820      45.942   2.587  19.774  1.00 25.78
ATOM   18854  O    VAL  2820      45.503   2.471  18.631  1.00 27.60
ATOM   18855  N    GLU  2821      45.704   1.696  20.729  1.00 24.73
ATOM   18856  CA   GLU  2821      44.895   0.514  20.477  1.00 25.30
ATOM   18857  CB   GLU  2821      44.782  -0.321  21.755  1.00 28.80
ATOM   18858  CG   GLU  2821      44.051  -1.643  21.574  1.00 32.13
ATOM   18859  CD   GLU  2821      43.926  -2.416  22.870  1.00 35.13
ATOM   18860  OE1  GLU  2821      43.340  -1.871  23.830  1.00 36.98
ATOM   18861  OE2  GLU  2821      44.410  -3.566  22.927  1.00 36.11
ATOM   18862  C    GLU  2821      43.501   0.876  19.962  1.00 24.62
ATOM   18863  O    GLU  2821      42.979   0.236  19.046  1.00 21.97
ATOM   18864  N    THR  2822      42.900   1.905  20.549  1.00 24.29
ATOM   18865  CA   THR  2822      41.568   2.336  20.141  1.00 23.99
ATOM   18866  CB   THR  2822      41.021   3.415  21.099  1.00 24.68
ATOM   18867  OG1  THR  2822      40.929   2.868  22.422  1.00 24.15
ATOM   18868  CG2  THR  2822      39.635   3.882  20.652  1.00 23.04
ATOM   18869  C    THR  2822      41.590   2.876  18.715  1.00 24.63
ATOM   18870  O    THR  2822      40.671   2.631  17.927  1.00 21.47
ATOM   18871  N    VAL  2823      42.645   3.611  18.381  1.00 23.83
ATOM   18872  CA   VAL  2823      42.785   4.170  17.041  1.00 23.79
ATOM   18873  CB   VAL  2823      44.002   5.116  16.961  1.00 25.30
ATOM   18874  CG1  VAL  2823      44.159   5.638  15.535  1.00 25.93
ATOM   18875  CG2  VAL  2823      43.816   6.276  17.928  1.00 25.50
ATOM   18876  C    VAL  2823      42.948   3.063  16.005  1.00 23.15
ATOM   18877  O    VAL  2823      42.275   3.063  14.974  1.00 21.77
ATOM   18878  N    GLN  2824      43.839   2.117  16.296  1.00 24.00
ATOM   18879  CA   GLN  2824      44.106   1.000  15.395  1.00 24.92
ATOM   18880  CB   GLN  2824      45.156   0.068  16.005  1.00 27.02
ATOM   18881  CG   GLN  2824      46.476   0.737  16.333  1.00 33.50
ATOM   18882  CD   GLN  2824      47.494  -0.229  16.908  1.00 35.79
ATOM   18883  OE1  GLN  2824      47.242  -0.891  17.917  1.00 38.12
ATOM   18884  NE2  GLN  2824      48.656  -0.312  16.267  1.00 38.24
ATOM   18885  C    GLN  2824      42.840   0.207  15.101  1.00 23.85
ATOM   18886  O    GLN  2824      42.518  -0.057  13.946  1.00 25.38
ATOM   18887  N    MET  2825      42.126  -0.167  16.155  1.00 23.02
ATOM   18888  CA   MET  2825      40.905  -0.946  16.010  1.00 22.80
ATOM   18889  CB   MET  2825      40.438  -1.426  17.385  1.00 23.09
ATOM   18890  CG   MET  2825      41.414  -2.396  18.028  1.00 24.85
ATOM   18891  SD   MET  2825      40.854  -3.051  19.588  1.00 26.27
ATOM   18892  CE   MET  2825      39.744  -4.323  19.026  1.00 27.47
ATOM   18893  C    MET  2825      39.786  -0.196  15.298  1.00 20.09
```

```
ATOM   18894  O    MET  2825      39.024   -0.793   14.543   1.00  19.10
ATOM   18895  N    LEU  2826      39.685    1.109   15.537   1.00  20.85
ATOM   18896  CA   LEU  2826      38.655    1.915   14.893   1.00  22.61
ATOM   18897  CB   LEU  2826      38.620    3.325   15.488   1.00  20.71
ATOM   18898  CG   LEU  2826      37.867    3.457   16.819   1.00  23.07
ATOM   18899  CD1  LEU  2826      38.183    4.783   17.487   1.00  21.86
ATOM   18900  CD2  LEU  2826      36.373    3.333   16.548   1.00  21.56
ATOM   18901  C    LEU  2826      38.883    1.998   13.385   1.00  24.44
ATOM   18902  O    LEU  2826      37.944    1.870   12.597   1.00  22.55
ATOM   18903  N    THR  2827      40.135    2.204   12.990   1.00  26.28
ATOM   18904  CA   THR  2827      40.474    2.301   11.578   1.00  29.53
ATOM   18905  CB   THR  2827      41.988    2.511   11.384   1.00  30.21
ATOM   18906  OG1  THR  2827      42.382    3.734   12.020   1.00  34.27
ATOM   18907  CG2  THR  2827      42.327    2.588    9.901   1.00  33.86
ATOM   18908  C    THR  2827      40.034    1.060   10.795   1.00  27.89
ATOM   18909  O    THR  2827      39.349    1.173    9.779   1.00  28.82
ATOM   18910  N    GLU  2828      40.416   -0.121   11.268   1.00  28.30
ATOM   18911  CA   GLU  2828      40.041   -1.350   10.580   1.00  28.55
ATOM   18912  CB   GLU  2828      40.775   -2.548   11.179   1.00  30.32
ATOM   18913  CG   GLU  2828      41.107   -2.404   12.638   1.00  31.98
ATOM   18914  CD   GLU  2828      41.836   -3.614   13.180   1.00  32.11
ATOM   18915  OE1  GLU  2828      42.836   -4.041   12.564   1.00  32.16
ATOM   18916  OE2  GLU  2828      41.415   -4.134   14.235   1.00  30.79
ATOM   18917  C    GLU  2828      38.540   -1.588   10.592   1.00  27.06
ATOM   18918  O    GLU  2828      38.030   -2.412    9.831   1.00  27.55
ATOM   18919  N    ARG  2829      37.829   -0.857   11.444   1.00  23.40
ATOM   18920  CA   ARG  2829      36.384   -0.997   11.513   1.00  22.00
ATOM   18921  CB   ARG  2829      35.931   -1.037   12.973   1.00  20.32
ATOM   18922  CG   ARG  2829      36.241   -2.378   13.629   1.00  19.39
ATOM   18923  CD   ARG  2829      36.285   -2.294   15.140   1.00  18.70
ATOM   18924  NE   ARG  2829      36.650   -3.585   15.719   1.00  16.89
ATOM   18925  CZ   ARG  2829      37.869   -4.112   15.666   1.00  17.72
ATOM   18926  NH1  ARG  2829      38.856   -3.459   15.065   1.00  16.97
ATOM   18927  NH2  ARG  2829      38.102   -5.303   16.201   1.00  21.33
ATOM   18928  C    ARG  2829      35.674    0.104   10.739   1.00  20.80
ATOM   18929  O    ARG  2829      34.536    0.458   11.040   1.00  19.63
ATOM   18930  N    ALA  2830      36.368    0.642    9.737   1.00  21.90
ATOM   18931  CA   ALA  2830      35.825    1.680    8.856   1.00  21.97
ATOM   18932  CB   ALA  2830      34.474    1.223    8.305   1.00  22.04
ATOM   18933  C    ALA  2830      35.690    3.086    9.435   1.00  22.69
ATOM   18934  O    ALA  2830      35.042    3.937    8.828   1.00  22.61
ATOM   18935  N    VAL  2831      36.297    3.341   10.589   1.00  22.14
ATOM   18936  CA   VAL  2831      36.194    4.662   11.194   1.00  22.55
ATOM   18937  CB   VAL  2831      35.679    4.570   12.651   1.00  23.25
ATOM   18938  CG1  VAL  2831      35.612    5.957   13.264   1.00  22.11
ATOM   18939  CG2  VAL  2831      34.300    3.910   12.684   1.00  21.29
ATOM   18940  C    VAL  2831      37.520    5.427   11.207   1.00  22.41
ATOM   18941  O    VAL  2831      38.439    5.071   11.940   1.00  21.58
ATOM   18942  N    PRO  2832      37.634    6.490   10.389   1.00  22.74
ATOM   18943  CD   PRO  2832      36.681    6.962    9.370   1.00  23.21
ATOM   18944  CA   PRO  2832      38.870    7.279   10.350   1.00  23.36
ATOM   18945  CB   PRO  2832      38.710    8.110    9.081   1.00  24.93
ATOM   18946  CG   PRO  2832      37.244    8.323    9.011   1.00  26.31
ATOM   18947  C    PRO  2832      38.961    8.129   11.611   1.00  23.38
ATOM   18948  O    PRO  2832      37.954    8.644   12.093   1.00  20.50
ATOM   18949  N    VAL  2833      40.169    8.274   12.143   1.00  23.46
ATOM   18950  CA   VAL  2833      40.352    9.035   13.368   1.00  24.56
ATOM   18951  CB   VAL  2833      40.985    8.147   14.466   1.00  25.29
ATOM   18952  CG1  VAL  2833      41.061    8.909   15.778   1.00  26.10
ATOM   18953  CG2  VAL  2833      40.167    6.869   14.638   1.00  26.15
ATOM   18954  C    VAL  2833      41.206   10.284   13.203   1.00  26.06
ATOM   18955  O    VAL  2833      42.156   10.307   12.420   1.00  22.96
ATOM   18956  N    CYS  2834      40.842   11.325   13.943   1.00  26.64
ATOM   18957  CA   CYS  2834      41.580   12.583   13.943   1.00  27.09
ATOM   18958  CB   CYS  2834      40.683   13.755   13.553   1.00  27.30
ATOM   18959  SG   CYS  2834      41.516   15.369   13.665   1.00  27.45
ATOM   18960  C    CYS  2834      42.098   12.794   15.358   1.00  28.85
ATOM   18961  O    CYS  2834      41.316   12.957   16.297   1.00  28.83
ATOM   18962  N    GLY  2835      43.418   12.776   15.508   1.00  29.22
ATOM   18963  CA   GLY  2835      44.014   12.970   16.816   1.00  29.92
ATOM   18964  C    GLY  2835      43.832   14.382   17.336   1.00  30.47
ATOM   18965  O    GLY  2835      43.460   15.288   16.590   1.00  28.61
ATOM   18966  N    HIS  2836      44.100   14.561   18.624   1.00  31.84
ATOM   18967  CA   HIS  2836      43.971   15.860   19.274   1.00  35.35
ATOM   18968  CB   HIS  2836      42.553   16.033   19.816   1.00  36.73
ATOM   18969  CG   HIS  2836      42.276   17.396   20.366   1.00  38.60
ATOM   18970  CD2  HIS  2836      42.821   18.067   21.409   1.00  39.81
```

```
ATOM   18971  ND1 HIS  2836      41.313  18.226  19.837  1.00 39.91
ATOM   18972  CE1 HIS  2836      41.274  19.350  20.531  1.00 41.13
ATOM   18973  NE2 HIS  2836      42.180  19.278  21.490  1.00 41.39
ATOM   18974  C   HIS  2836      44.973  15.941  20.420  1.00 36.62
ATOM   18975  O   HIS  2836      44.800  15.291  21.452  1.00 34.99
ATOM   18976  N   LEU  2837      46.018  16.742  20.231  1.00 38.21
ATOM   18977  CA  LEU  2837      47.059  16.905  21.239  1.00 41.31
ATOM   18978  CB  LEU  2837      48.365  16.279  20.745  1.00 40.92
ATOM   18979  CG  LEU  2837      48.343  14.765  20.510  1.00 40.97
ATOM   18980  CD1 LEU  2837      49.609  14.330  19.794  1.00 41.01
ATOM   18981  CD2 LEU  2837      48.201  14.051  21.840  1.00 41.35
ATOM   18982  C   LEU  2837      47.285  18.377  21.557  1.00 43.49
ATOM   18983  O   LEU  2837      46.981  19.249  20.745  1.00 43.31
ATOM   18984  N   GLY  2838      47.820  18.647  22.743  1.00 46.60
ATOM   18985  CA  GLY  2838      48.077  20.018  23.141  1.00 50.65
ATOM   18986  C   GLY  2838      47.359  20.378  24.425  1.00 53.60
ATOM   18987  O   GLY  2838      47.800  20.013  25.514  1.00 54.57
ATOM   18988  N   LEU  2839      46.246  21.092  24.297  1.00 56.02
ATOM   18989  CA  LEU  2839      45.466  21.503  25.457  1.00 58.56
ATOM   18990  CB  LEU  2839      45.363  23.032  25.490  1.00 58.83
ATOM   18991  CG  LEU  2839      45.049  23.710  26.827  1.00 59.71
ATOM   18992  CD1 LEU  2839      45.256  25.209  26.685  1.00 60.17
ATOM   18993  CD2 LEU  2839      43.631  23.394  27.263  1.00 59.46
ATOM   18994  C   LEU  2839      44.074  20.875  25.377  1.00 60.00
ATOM   18995  O   LEU  2839      43.142  21.473  24.843  1.00 60.93
ATOM   18996  N   THR  2840      43.944  19.663  25.910  1.00 61.24
ATOM   18997  CA  THR  2840      42.672  18.946  25.892  1.00 62.45
ATOM   18998  CB  THR  2840      42.879  17.438  26.157  1.00 62.30
ATOM   18999  OG1 THR  2840      43.477  17.254  27.446  1.00 62.47
ATOM   19000  CG2 THR  2840      43.782  16.831  25.094  1.00 62.36
ATOM   19001  C   THR  2840      41.688  19.493  26.925  1.00 63.01
ATOM   19002  O   THR  2840      41.915  19.383  28.131  1.00 63.56
ATOM   19003  N   PRO  2841      40.577  20.090  26.460  1.00 63.41
ATOM   19004  CD  PRO  2841      40.230  20.321  25.046  1.00 63.65
ATOM   19005  CA  PRO  2841      39.553  20.658  27.343  1.00 63.37
ATOM   19006  CB  PRO  2841      38.678  21.457  26.380  1.00 63.72
ATOM   19007  CG  PRO  2841      38.754  20.648  25.127  1.00 64.24
ATOM   19008  C   PRO  2841      38.756  19.614  28.127  1.00 62.86
ATOM   19009  O   PRO  2841      38.222  19.911  29.196  1.00 62.53
ATOM   19010  N   GLN  2842      38.676  18.397  27.594  1.00 62.50
ATOM   19011  CA  GLN  2842      37.945  17.320  28.258  1.00 62.12
ATOM   19012  CB  GLN  2842      37.873  16.081  27.359  1.00 62.10
ATOM   19013  CG  GLN  2842      36.798  16.147  26.282  1.00 61.81
ATOM   19014  CD  GLN  2842      36.712  14.871  25.465  1.00 61.57
ATOM   19015  OE1 GLN  2842      36.650  13.772  26.016  1.00 61.29
ATOM   19016  NE2 GLN  2842      36.698  15.012  24.145  1.00 61.54
ATOM   19017  C   GLN  2842      38.583  16.942  29.591  1.00 61.81
ATOM   19018  O   GLN  2842      37.955  16.293  30.429  1.00 61.09
ATOM   19019  N   SER  2843      39.833  17.352  29.781  1.00 61.46
ATOM   19020  CA  SER  2843      40.557  17.060  31.012  1.00 61.52
ATOM   19021  CB  SER  2843      41.890  16.381  30.689  1.00 61.26
ATOM   19022  OG  SER  2843      41.690  15.191  29.947  1.00 61.14
ATOM   19023  C   SER  2843      40.810  18.342  31.798  1.00 61.57
ATOM   19024  O   SER  2843      41.905  18.555  32.320  1.00 62.21
ATOM   19025  N   VAL  2844      39.790  19.191  31.879  1.00 61.40
ATOM   19026  CA  VAL  2844      39.894  20.460  32.593  1.00 61.08
ATOM   19027  CB  VAL  2844      38.645  21.343  32.336  1.00 60.81
ATOM   19028  CG1 VAL  2844      37.385  20.609  32.764  1.00 60.34
ATOM   19029  CG2 VAL  2844      38.775  22.662  33.080  1.00 60.79
ATOM   19030  C   VAL  2844      40.066  20.259  34.101  1.00 61.01
ATOM   19031  O   VAL  2844      40.803  21.001  34.754  1.00 60.58
ATOM   19032  N   ASN  2845      39.389  19.251  34.644  1.00 61.15
ATOM   19033  CA  ASN  2845      39.460  18.947  36.071  1.00 61.73
ATOM   19034  CB  ASN  2845      38.364  17.946  36.449  1.00 60.56
ATOM   19035  CG  ASN  2845      36.970  18.499  36.230  1.00 59.61
ATOM   19036  OD1 ASN  2845      36.548  19.436  36.907  1.00 58.50
ATOM   19037  ND2 ASN  2845      36.249  17.924  35.275  1.00 59.70
ATOM   19038  C   ASN  2845      40.821  18.388  36.475  1.00 62.60
ATOM   19039  O   ASN  2845      41.296  18.629  37.586  1.00 62.03
ATOM   19040  N   ILE  2846      41.441  17.636  35.570  1.00 64.05
ATOM   19041  CA  ILE  2846      42.750  17.046  35.831  1.00 65.55
ATOM   19042  CB  ILE  2846      43.208  16.151  34.651  1.00 65.57
ATOM   19043  CG2 ILE  2846      44.609  15.612  34.915  1.00 65.70
ATOM   19044  CG1 ILE  2846      42.223  14.995  34.453  1.00 65.59
ATOM   19045  CD1 ILE  2846      42.118  14.057  35.643  1.00 65.41
ATOM   19046  C   ILE  2846      43.795  18.137  36.051  1.00 66.57
ATOM   19047  O   ILE  2846      44.490  18.150  37.066  1.00 66.67
```

```
ATOM    19048  N    PHE   2847      43.896  19.053  35.092  1.00 67.71
ATOM    19049  CA   PHE   2847      44.855  20.149  35.172  1.00 68.89
ATOM    19050  CB   PHE   2847      45.158  20.684  33.771  1.00 69.22
ATOM    19051  CG   PHE   2847      45.618  19.630  32.807  1.00 69.88
ATOM    19052  CD1  PHE   2847      46.776  18.899  33.055  1.00 70.09
ATOM    19053  CD2  PHE   2847      44.892  19.365  31.649  1.00 70.08
ATOM    19054  CE1  PHE   2847      47.206  17.918  32.164  1.00 70.40
ATOM    19055  CE2  PHE   2847      45.311  18.387  30.751  1.00 70.36
ATOM    19056  CZ   PHE   2847      46.471  17.661  31.009  1.00 70.74
ATOM    19057  C    PHE   2847      44.333  21.284  36.050  1.00 69.49
ATOM    19058  O    PHE   2847      45.040  22.262  36.299  1.00 69.68
ATOM    19059  N    GLY   2848      43.094  21.149  36.513  1.00 69.83
ATOM    19060  CA   GLY   2848      42.502  22.174  37.353  1.00 70.24
ATOM    19061  C    GLY   2848      42.298  23.478  36.605  1.00 70.50
ATOM    19062  O    GLY   2848      42.086  24.528  37.212  1.00 70.31
ATOM    19063  N    GLY   2849      42.363  23.407  35.280  1.00 71.04
ATOM    19064  CA   GLY   2849      42.185  24.591  34.459  1.00 71.60
ATOM    19065  C    GLY   2849      42.700  24.367  33.051  1.00 72.16
ATOM    19066  O    GLY   2849      42.776  23.228  32.589  1.00 72.14
ATOM    19067  N    TYR   2850      43.056  25.450  32.366  1.00 72.95
ATOM    19068  CA   TYR   2850      43.570  25.353  31.005  1.00 73.65
ATOM    19069  CB   TYR   2850      42.679  26.142  30.038  1.00 73.69
ATOM    19070  CG   TYR   2850      41.257  25.633  29.969  1.00 74.01
ATOM    19071  CD1  TYR   2850      40.353  25.887  31.001  1.00 74.35
ATOM    19072  CE1  TYR   2850      39.050  25.395  30.956  1.00 74.49
ATOM    19073  CD2  TYR   2850      40.821  24.871  28.883  1.00 74.02
ATOM    19074  CE2  TYR   2850      39.520  24.373  28.828  1.00 74.41
ATOM    19075  CZ   TYR   2850      38.641  24.639  29.868  1.00 74.86
ATOM    19076  OH   TYR   2850      37.355  24.146  29.826  1.00 75.22
ATOM    19077  C    TYR   2850      45.007  25.853  30.907  1.00 74.10
ATOM    19078  O    TYR   2850      45.256  27.059  30.847  1.00 74.16
ATOM    19079  N    LYS   2851      45.947  24.913  30.892  1.00 74.74
ATOM    19080  CA   LYS   2851      47.369  25.229  30.801  1.00 75.33
ATOM    19081  CB   LYS   2851      48.166  24.299  31.719  1.00 75.40
ATOM    19082  CG   LYS   2851      47.704  24.325  33.168  1.00 75.61
ATOM    19083  CD   LYS   2851      48.399  23.258  33.998  1.00 75.38
ATOM    19084  CE   LYS   2851      47.875  23.249  35.426  1.00 75.26
ATOM    19085  NZ   LYS   2851      48.476  22.152  36.233  1.00 74.92
ATOM    19086  C    LYS   2851      47.845  25.070  29.358  1.00 75.66
ATOM    19087  O    LYS   2851      47.572  24.057  28.714  1.00 76.01
ATOM    19088  N    VAL   2852      48.557  26.073  28.857  1.00 75.85
ATOM    19089  CA   VAL   2852      49.062  26.043  27.489  1.00 76.08
ATOM    19090  CB   VAL   2852      49.525  27.448  27.036  1.00 75.99
ATOM    19091  CG1  VAL   2852      49.922  27.421  25.568  1.00 75.65
ATOM    19092  CG2  VAL   2852      48.417  28.463  27.273  1.00 75.82
ATOM    19093  C    VAL   2852      50.234  25.074  27.346  1.00 76.39
ATOM    19094  O    VAL   2852      51.395  25.484  27.394  1.00 76.33
ATOM    19095  N    GLN   2853      49.930  23.789  27.173  1.00 76.70
ATOM    19096  CA   GLN   2853      50.971  22.777  27.016  1.00 77.12
ATOM    19097  CB   GLN   2853      50.360  21.375  26.913  1.00 77.23
ATOM    19098  CG   GLN   2853      50.094  20.680  28.247  1.00 76.94
ATOM    19099  CD   GLN   2853      48.944  21.289  29.021  1.00 76.79
ATOM    19100  OE1  GLN   2853      47.825  21.379  28.519  1.00 76.67
ATOM    19101  NE2  GLN   2853      49.210  21.699  30.256  1.00 77.11
ATOM    19102  C    GLN   2853      51.813  23.054  25.774  1.00 77.33
ATOM    19103  O    GLN   2853      51.369  23.740  24.853  1.00 77.15
ATOM    19104  N    GLY   2854      53.027  22.514  25.755  1.00 77.75
ATOM    19105  CA   GLY   2854      53.911  22.717  24.622  1.00 78.29
ATOM    19106  C    GLY   2854      55.254  23.293  25.028  1.00 78.76
ATOM    19107  O    GLY   2854      56.190  23.331  24.228  1.00 78.78
ATOM    19108  N    ARG   2855      55.348  23.744  26.276  1.00 79.02
ATOM    19109  CA   ARG   2855      56.584  24.320  26.800  1.00 79.07
ATOM    19110  CB   ARG   2855      56.271  25.282  27.954  1.00 79.32
ATOM    19111  CG   ARG   2855      55.397  26.471  27.572  1.00 79.76
ATOM    19112  CD   ARG   2855      56.115  27.420  26.620  1.00 80.09
ATOM    19113  NE   ARG   2855      55.254  28.516  26.174  1.00 80.24
ATOM    19114  CZ   ARG   2855      54.727  29.437  26.976  1.00 79.98
ATOM    19115  NH1  ARG   2855      54.968  29.406  28.280  1.00 79.86
ATOM    19116  NH2  ARG   2855      53.956  30.393  26.473  1.00 79.79
ATOM    19117  C    ARG   2855      57.524  23.222  27.293  1.00 78.89
ATOM    19118  O    ARG   2855      57.079  22.176  27.767  1.00 78.88
ATOM    19119  N    GLY   2856      58.826  23.468  27.179  1.00 78.53
ATOM    19120  CA   GLY   2856      59.805  22.492  27.619  1.00 78.02
ATOM    19121  C    GLY   2856      60.118  21.456  26.557  1.00 77.79
ATOM    19122  O    GLY   2856      59.439  21.382  25.532  1.00 77.80
ATOM    19123  N    ASP   2857      61.150  20.655  26.802  1.00 77.36
ATOM    19124  CA   ASP   2857      61.555  19.616  25.861  1.00 76.70
```

```
ATOM   19125  CB   ASP   2857      63.077  19.446  25.875  1.00 76.96
ATOM   19126  CG   ASP   2857      63.801  20.634  25.273  1.00 77.36
ATOM   19127  OD1  ASP   2857      63.527  20.962  24.099  1.00 77.51
ATOM   19128  OD2  ASP   2857      64.644  21.235  25.971  1.00 77.38
ATOM   19129  C    ASP   2857      60.892  18.282  26.177  1.00 75.97
ATOM   19130  O    ASP   2857      60.391  17.606  25.280  1.00 76.56
ATOM   19131  N    GLU   2858      60.896  17.901  27.450  1.00 74.75
ATOM   19132  CA   GLU   2858      60.288  16.644  27.863  1.00 73.64
ATOM   19133  CB   GLU   2858      60.368  16.484  29.383  1.00 74.08
ATOM   19134  CG   GLU   2858      59.765  15.184  29.899  1.00 74.86
ATOM   19135  CD   GLU   2858      59.856  15.050  31.408  1.00 75.46
ATOM   19136  OE1  GLU   2858      60.986  15.074  31.941  1.00 75.97
ATOM   19137  OE2  GLU   2858      58.798  14.918  32.061  1.00 75.55
ATOM   19138  C    GLU   2858      58.831  16.596  27.416  1.00 72.68
ATOM   19139  O    GLU   2858      58.319  15.537  27.056  1.00 72.94
ATOM   19140  N    ALA   2859      58.172  17.751  27.441  1.00 71.17
ATOM   19141  CA   ALA   2859      56.774  17.848  27.036  1.00 69.66
ATOM   19142  CB   ALA   2859      56.091  18.987  27.786  1.00 69.37
ATOM   19143  C    ALA   2859      56.682  18.083  25.534  1.00 68.42
ATOM   19144  O    ALA   2859      55.790  17.560  24.864  1.00 68.24
ATOM   19145  N    GLY   2860      57.613  18.876  25.014  1.00 67.04
ATOM   19146  CA   GLY   2860      57.628  19.171  23.595  1.00 65.45
ATOM   19147  C    GLY   2860      57.836  17.929  22.753  1.00 64.41
ATOM   19148  O    GLY   2860      57.153  17.734  21.748  1.00 64.15
ATOM   19149  N    ASP   2861      58.782  17.087  23.160  1.00 63.48
ATOM   19150  CA   ASP   2861      59.070  15.856  22.433  1.00 62.53
ATOM   19151  CB   ASP   2861      60.439  15.302  22.831  1.00 62.67
ATOM   19152  CG   ASP   2861      61.562  16.288  22.579  1.00 63.21
ATOM   19153  OD1  ASP   2861      61.615  16.865  21.471  1.00 62.95
ATOM   19154  OD2  ASP   2861      62.397  16.478  23.487  1.00 63.46
ATOM   19155  C    ASP   2861      57.999  14.811  22.716  1.00 61.69
ATOM   19156  O    ASP   2861      57.830  13.860  21.953  1.00 61.58
ATOM   19157  N    GLN   2862      57.285  14.992  23.822  1.00 60.47
ATOM   19158  CA   GLN   2862      56.221  14.073  24.207  1.00 59.44
ATOM   19159  CB   GLN   2862      55.729  14.389  25.620  1.00 59.54
ATOM   19160  CG   GLN   2862      54.527  13.569  26.050  1.00 59.67
ATOM   19161  CD   GLN   2862      54.800  12.080  26.016  1.00 59.97
ATOM   19162  OE1  GLN   2862      55.653  11.578  26.748  1.00 60.86
ATOM   19163  NE2  GLN   2862      54.078  11.366  25.160  1.00 59.63
ATOM   19164  C    GLN   2862      55.061  14.194  23.227  1.00 58.25
ATOM   19165  O    GLN   2862      54.494  13.193  22.797  1.00 58.14
ATOM   19166  N    LEU   2863      54.712  15.429  22.884  1.00 57.06
ATOM   19167  CA   LEU   2863      53.625  15.679  21.951  1.00 56.74
ATOM   19168  CB   LEU   2863      53.350  17.181  21.844  1.00 57.27
ATOM   19169  CG   LEU   2863      52.854  17.884  23.111  1.00 57.78
ATOM   19170  CD1  LEU   2863      52.796  19.385  22.873  1.00 58.08
ATOM   19171  CD2  LEU   2863      51.485  17.347  23.497  1.00 57.79
ATOM   19172  C    LEU   2863      53.988  15.128  20.580  1.00 56.01
ATOM   19173  O    LEU   2863      53.163  14.504  19.911  1.00 56.51
ATOM   19174  N    LEU   2864      55.230  15.358  20.168  1.00 54.58
ATOM   19175  CA   LEU   2864      55.700  14.882  18.873  1.00 53.21
ATOM   19176  CB   LEU   2864      57.106  15.427  18.596  1.00 53.69
ATOM   19177  CG   LEU   2864      57.598  15.447  17.145  1.00 54.10
ATOM   19178  CD1  LEU   2864      58.822  16.342  17.047  1.00 54.57
ATOM   19179  CD2  LEU   2864      57.911  14.043  16.669  1.00 53.90
ATOM   19180  C    LEU   2864      55.707  13.355  18.879  1.00 51.65
ATOM   19181  O    LEU   2864      55.486  12.717  17.847  1.00 50.82
ATOM   19182  N    SER   2865      55.954  12.781  20.053  1.00 49.04
ATOM   19183  CA   SER   2865      55.975  11.332  20.209  1.00 47.06
ATOM   19184  CB   SER   2865      56.542  10.954  21.581  1.00 46.62
ATOM   19185  OG   SER   2865      56.593   9.548  21.749  1.00 44.01
ATOM   19186  C    SER   2865      54.561  10.774  20.062  1.00 45.80
ATOM   19187  O    SER   2865      54.346   9.778  19.367  1.00 44.53
ATOM   19188  N    ASP   2866      53.600  11.417  20.720  1.00 44.91
ATOM   19189  CA   ASP   2866      52.210  10.976  20.645  1.00 44.58
ATOM   19190  CB   ASP   2866      51.329  11.752  21.631  1.00 45.13
ATOM   19191  CG   ASP   2866      51.719  11.514  23.080  1.00 45.03
ATOM   19192  OD1  ASP   2866      51.989  10.352  23.452  1.00 44.80
ATOM   19193  OD2  ASP   2866      51.740  12.489  23.855  1.00 46.12
ATOM   19194  C    ASP   2866      51.687  11.180  19.229  1.00 44.24
ATOM   19195  O    ASP   2866      50.975  10.329  18.694  1.00 45.01
ATOM   19196  N    ALA   2867      52.043  12.310  18.626  1.00 42.65
ATOM   19197  CA   ALA   2867      51.612  12.610  17.267  1.00 41.30
ATOM   19198  CB   ALA   2867      52.178  13.952  16.820  1.00 40.89
ATOM   19199  C    ALA   2867      52.077  11.498  16.328  1.00 40.67
ATOM   19200  O    ALA   2867      51.325  11.051  15.461  1.00 38.64
ATOM   19201  N    LEU   2868      53.318  11.052  16.506  1.00 39.50
```

```
ATOM   19202  CA   LEU  2868     53.862    9.982   15.674  1.00 39.13
ATOM   19203  CB   LEU  2868     55.375    9.852   15.881  1.00 39.80
ATOM   19204  CG   LEU  2868     56.263   10.908   15.223  1.00 39.60
ATOM   19205  CD1  LEU  2868     57.701   10.724   15.682  1.00 40.79
ATOM   19206  CD2  LEU  2868     56.167   10.790   13.709  1.00 40.12
ATOM   19207  C    LEU  2868     53.189    8.655   16.003  1.00 38.24
ATOM   19208  O    LEU  2868     52.981    7.817   15.124  1.00 37.72
ATOM   19209  N    ALA  2869     52.853    8.470   17.275  1.00 36.58
ATOM   19210  CA   ALA  2869     52.197    7.246   17.723  1.00 36.98
ATOM   19211  CB   ALA  2869     52.156    7.206   19.245  1.00 36.32
ATOM   19212  C    ALA  2869     50.782    7.165   17.157  1.00 36.13
ATOM   19213  O    ALA  2869     50.346    6.109   16.699  1.00 37.03
ATOM   19214  N    LEU  2870     50.070    8.287   17.195  1.00 35.62
ATOM   19215  CA   LEU  2870     48.705    8.349   16.684  1.00 35.07
ATOM   19216  CB   LEU  2870     48.091    9.719   16.990  1.00 35.82
ATOM   19217  CG   LEU  2870     47.905   10.070   18.471  1.00 36.77
ATOM   19218  CD1  LEU  2870     47.517   11.530   18.606  1.00 37.65
ATOM   19219  CD2  LEU  2870     46.842    9.171   19.087  1.00 37.97
ATOM   19220  C    LEU  2870     48.703    8.099   15.180  1.00 33.74
ATOM   19221  O    LEU  2870     47.826    7.413   14.655  1.00 32.74
ATOM   19222  N    GLU  2871     49.692    8.656   14.489  1.00 33.03
ATOM   19223  CA   GLU  2871     49.807    8.480   13.047  1.00 31.65
ATOM   19224  CB   GLU  2871     50.952    9.338   12.501  1.00 32.99
ATOM   19225  CG   GLU  2871     51.193    9.165   11.011  1.00 33.67
ATOM   19226  CD   GLU  2871     52.375    9.974   10.518  1.00 34.78
ATOM   19227  OE1  GLU  2871     53.477    9.806   11.085  1.00 33.73
ATOM   19228  OE2  GLU  2871     52.205   10.766    9.567  1.00 35.40
ATOM   19229  C    GLU  2871     50.061    7.015   12.715  1.00 31.63
ATOM   19230  O    GLU  2871     49.438    6.460   11.811  1.00 31.20
ATOM   19231  N    ALA  2872     50.975    6.391   13.451  1.00 30.57
ATOM   19232  CA   ALA  2872     51.306    4.988   13.221  1.00 30.98
ATOM   19233  CB   ALA  2872     52.506    4.588   14.076  1.00 30.03
ATOM   19234  C    ALA  2872     50.110    4.095   13.544  1.00 29.80
ATOM   19235  O    ALA  2872     49.949    3.020   12.965  1.00 28.80
ATOM   19236  N    ALA  2873     49.274    4.561   14.468  1.00 29.24
ATOM   19237  CA   ALA  2873     48.086    3.832   14.898  1.00 27.99
ATOM   19238  CB   ALA  2873     47.538    4.449   16.185  1.00 27.72
ATOM   19239  C    ALA  2873     47.010    3.825   13.818  1.00 28.11
ATOM   19240  O    ALA  2873     46.158    2.935   13.782  1.00 27.45
ATOM   19241  N    GLY  2874     47.044    4.821   12.939  1.00 26.89
ATOM   19242  CA   GLY  2874     46.059    4.883   11.874  1.00 27.96
ATOM   19243  C    GLY  2874     45.396    6.235   11.685  1.00 27.38
ATOM   19244  O    GLY  2874     44.639    6.428   10.736  1.00 27.45
ATOM   19245  N    ALA  2875     45.671    7.175   12.583  1.00 28.20
ATOM   19246  CA   ALA  2875     45.085    8.502   12.481  1.00 28.33
ATOM   19247  CB   ALA  2875     45.556    9.366   13.640  1.00 29.66
ATOM   19248  C    ALA  2875     45.462    9.154   11.147  1.00 30.07
ATOM   19249  O    ALA  2875     46.634    9.176   10.768  1.00 30.07
ATOM   19250  N    GLN  2876     44.466    9.679   10.436  1.00 29.85
ATOM   19251  CA   GLN  2876     44.704   10.324    9.146  1.00 31.07
ATOM   19252  CB   GLN  2876     43.634    9.895    8.141  1.00 32.52
ATOM   19253  CG   GLN  2876     43.582    8.393    7.917  1.00 33.27
ATOM   19254  CD   GLN  2876     42.514    7.983    6.922  1.00 35.64
ATOM   19255  OE1  GLN  2876     42.635    8.238    5.720  1.00 37.92
ATOM   19256  NE2  GLN  2876     41.459    7.346    7.417  1.00 34.07
ATOM   19257  C    GLN  2876     44.716   11.842    9.270  1.00 32.63
ATOM   19258  O    GLN  2876     44.871   12.556    8.278  1.00 32.11
ATOM   19259  N    LEU  2877     44.560   12.321   10.500  1.00 34.15
ATOM   19260  CA   LEU  2877     44.547   13.750   10.794  1.00 35.91
ATOM   19261  CB   LEU  2877     43.154   14.329   10.547  1.00 36.23
ATOM   19262  CG   LEU  2877     42.960   15.163    9.283  1.00 37.74
ATOM   19263  CD1  LEU  2877     41.505   15.594    9.176  1.00 37.26
ATOM   19264  CD2  LEU  2877     43.877   16.373    9.332  1.00 37.89
ATOM   19265  C    LEU  2877     44.933   13.990   12.244  1.00 36.30
ATOM   19266  O    LEU  2877     44.750   13.117   13.090  1.00 36.32
ATOM   19267  N    LEU  2878     45.465   15.178   12.522  1.00 37.48
ATOM   19268  CA   LEU  2878     45.875   15.555   13.873  1.00 38.35
ATOM   19269  CB   LEU  2878     47.379   15.346   14.057  1.00 37.59
ATOM   19270  CG   LEU  2878     47.944   15.762   15.418  1.00 38.15
ATOM   19271  CD1  LEU  2878     47.332   14.906   16.517  1.00 37.53
ATOM   19272  CD2  LEU  2878     49.458   15.611   15.411  1.00 38.68
ATOM   19273  C    LEU  2878     45.535   17.017   14.151  1.00 39.83
ATOM   19274  O    LEU  2878     45.609   17.861   13.257  1.00 39.08
ATOM   19275  N    VAL  2879     45.162   17.309   15.393  1.00 41.38
ATOM   19276  CA   VAL  2879     44.820   18.670   15.793  1.00 42.90
ATOM   19277  CB   VAL  2879     43.342   18.778   16.231  1.00 42.29
ATOM   19278  CG1  VAL  2879     43.035   20.196   16.685  1.00 42.71
```

```
ATOM   19279  CG2 VAL  2879     42.433  18.384  15.086  1.00 41.99
ATOM   19280  C   VAL  2879     45.700  19.133  16.949  1.00 44.01
ATOM   19281  O   VAL  2879     45.791  18.468  17.983  1.00 43.86
ATOM   19282  N   LEU  2880     46.352  20.276  16.760  1.00 45.45
ATOM   19283  CA  LEU  2880     47.221  20.852  17.781  1.00 47.07
ATOM   19284  CB  LEU  2880     48.564  21.261  17.170  1.00 47.30
ATOM   19285  CG  LEU  2880     49.446  20.136  16.632  1.00 47.79
ATOM   19286  CD1 LEU  2880     50.688  20.726  15.975  1.00 48.71
ATOM   19287  CD2 LEU  2880     49.832  19.201  17.770  1.00 47.63
ATOM   19288  C   LEU  2880     46.539  22.073  18.381  1.00 48.19
ATOM   19289  O   LEU  2880     46.213  23.022  17.667  1.00 48.54
ATOM   19290  N   GLU  2881     46.326  22.047  19.692  1.00 49.26
ATOM   19291  CA  GLU  2881     45.668  23.154  20.377  1.00 51.27
ATOM   19292  CB  GLU  2881     44.478  22.635  21.186  1.00 51.11
ATOM   19293  CG  GLU  2881     43.547  23.724  21.684  1.00 52.03
ATOM   19294  CD  GLU  2881     42.497  23.196  22.631  1.00 51.94
ATOM   19295  OE1 GLU  2881     41.810  22.220  22.271  1.00 51.97
ATOM   19296  OE2 GLU  2881     42.358  23.756  23.740  1.00 53.44
ATOM   19297  C   GLU  2881     46.629  23.894  21.304  1.00 52.45
ATOM   19298  O   GLU  2881     47.177  23.308  22.239  1.00 51.90
ATOM   19299  N   CYS  2882     46.818  25.185  21.038  1.00 53.90
ATOM   19300  CA  CYS  2882     47.705  26.033  21.832  1.00 55.11
ATOM   19301  CB  CYS  2882     47.038  26.398  23.159  1.00 55.59
ATOM   19302  SG  CYS  2882     45.596  27.473  22.965  1.00 57.79
ATOM   19303  C   CYS  2882     49.054  25.381  22.095  1.00 55.25
ATOM   19304  O   CYS  2882     49.260  24.729  23.119  1.00 55.61
ATOM   19305  N   VAL  2883     49.974  25.570  21.158  1.00 55.88
ATOM   19306  CA  VAL  2883     51.312  25.006  21.264  1.00 56.54
ATOM   19307  CB  VAL  2883     51.364  23.606  20.601  1.00 56.77
ATOM   19308  CG1 VAL  2883     50.923  23.700  19.150  1.00 57.14
ATOM   19309  CG2 VAL  2883     52.764  23.029  20.694  1.00 56.92
ATOM   19310  C   VAL  2883     52.291  25.949  20.568  1.00 56.70
ATOM   19311  O   VAL  2883     51.988  26.489  19.502  1.00 56.49
ATOM   19312  N   PRO  2884     53.476  26.168  21.167  1.00 56.87
ATOM   19313  CD  PRO  2884     54.038  25.483  22.342  1.00 56.82
ATOM   19314  CA  PRO  2884     54.473  27.060  20.565  1.00 56.93
ATOM   19315  CB  PRO  2884     55.699  26.863  21.459  1.00 56.72
ATOM   19316  CG  PRO  2884     55.503  25.482  22.019  1.00 57.13
ATOM   19317  C   PRO  2884     54.747  26.718  19.105  1.00 57.27
ATOM   19318  O   PRO  2884     54.999  25.562  18.766  1.00 57.23
ATOM   19319  N   VAL  2885     54.689  27.735  18.250  1.00 56.98
ATOM   19320  CA  VAL  2885     54.908  27.564  16.818  1.00 57.68
ATOM   19321  CB  VAL  2885     55.176  28.918  16.129  1.00 57.41
ATOM   19322  CG1 VAL  2885     55.141  28.747  14.620  1.00 57.11
ATOM   19323  CG2 VAL  2885     54.150  29.942  16.578  1.00 57.26
ATOM   19324  C   VAL  2885     56.079  26.632  16.519  1.00 58.32
ATOM   19325  O   VAL  2885     56.046  25.867  15.553  1.00 58.54
ATOM   19326  N   GLU  2886     57.108  26.701  17.358  1.00 58.72
ATOM   19327  CA  GLU  2886     58.300  25.876  17.194  1.00 58.51
ATOM   19328  CB  GLU  2886     59.282  26.138  18.341  1.00 59.10
ATOM   19329  CG  GLU  2886     59.379  27.602  18.763  1.00 59.54
ATOM   19330  CD  GLU  2886     59.529  28.549  17.586  1.00 59.84
ATOM   19331  OE1 GLU  2886     60.465  28.357  16.779  1.00 60.96
ATOM   19332  OE2 GLU  2886     58.711  29.488  17.473  1.00 59.20
ATOM   19333  C   GLU  2886     57.937  24.394  17.164  1.00 58.20
ATOM   19334  O   GLU  2886     58.373  23.650  16.283  1.00 57.63
ATOM   19335  N   LEU  2887     57.131  23.975  18.134  1.00 57.62
ATOM   19336  CA  LEU  2887     56.706  22.586  18.235  1.00 57.41
ATOM   19337  CB  LEU  2887     55.937  22.371  19.540  1.00 56.08
ATOM   19338  CG  LEU  2887     56.331  21.145  20.368  1.00 55.97
ATOM   19339  CD1 LEU  2887     55.545  21.140  21.668  1.00 55.92
ATOM   19340  CD2 LEU  2887     56.075  19.875  19.578  1.00 55.54
ATOM   19341  C   LEU  2887     55.833  22.193  17.046  1.00 57.47
ATOM   19342  O   LEU  2887     55.948  21.086  16.519  1.00 57.79
ATOM   19343  N   ALA  2888     54.962  23.106  16.628  1.00 57.65
ATOM   19344  CA  ALA  2888     54.071  22.861  15.500  1.00 57.47
ATOM   19345  CB  ALA  2888     53.138  24.051  15.306  1.00 57.84
ATOM   19346  C   ALA  2888     54.859  22.604  14.219  1.00 57.89
ATOM   19347  O   ALA  2888     54.491  21.751  13.411  1.00 57.53
ATOM   19348  N   LYS  2889     55.944  23.352  14.040  1.00 57.61
ATOM   19349  CA  LYS  2889     56.790  23.211  12.862  1.00 57.71
ATOM   19350  CB  LYS  2889     57.952  24.205  12.929  1.00 58.61
ATOM   19351  CG  LYS  2889     57.518  25.662  12.982  1.00 60.67
ATOM   19352  CD  LYS  2889     58.694  26.590  13.263  1.00 62.37
ATOM   19353  CE  LYS  2889     58.243  28.043  13.347  1.00 62.84
ATOM   19354  NZ  LYS  2889     59.353  28.959  13.729  1.00 63.21
ATOM   19355  C   LYS  2889     57.337  21.794  12.763  1.00 57.10
```

```
ATOM   19356  O    LYS  2889      57.302  21.180  11.696  1.00 57.17
ATOM   19357  N    ARG  2890      57.840  21.281  13.881  1.00 56.24
ATOM   19358  CA   ARG  2890      58.401  19.936  13.923  1.00 55.63
ATOM   19359  CB   ARG  2890      58.973  19.639  15.311  1.00 56.65
ATOM   19360  CG   ARG  2890      60.157  20.501  15.697  1.00 58.26
ATOM   19361  CD   ARG  2890      60.844  19.945  16.934  1.00 60.00
ATOM   19362  NE   ARG  2890      59.947  19.894  18.084  1.00 61.53
ATOM   19363  CZ   ARG  2890      60.260  19.344  19.254  1.00 62.29
ATOM   19364  NH1  ARG  2890      61.451  18.791  19.433  1.00 62.17
ATOM   19365  NH2  ARG  2890      59.381  19.349  20.246  1.00 63.05
ATOM   19366  C    ARG  2890      57.364  18.880  13.573  1.00 54.19
ATOM   19367  O    ARG  2890      57.502  18.162  12.584  1.00 53.84
ATOM   19368  N    ILE  2891      56.329  18.790  14.401  1.00 52.97
ATOM   19369  CA   ILE  2891      55.256  17.826  14.202  1.00 51.09
ATOM   19370  CB   ILE  2891      54.099  18.088  15.187  1.00 51.37
ATOM   19371  CG2  ILE  2891      52.970  17.095  14.947  1.00 50.95
ATOM   19372  CG1  ILE  2891      54.613  17.981  16.626  1.00 50.98
ATOM   19373  CD1  ILE  2891      53.598  18.382  17.676  1.00 50.45
ATOM   19374  C    ILE  2891      54.712  17.874  12.777  1.00 50.48
ATOM   19375  O    ILE  2891      54.621  16.845  12.108  1.00 50.45
ATOM   19376  N    THR  2892      54.358  19.069  12.316  1.00 49.45
ATOM   19377  CA   THR  2892      53.816  19.230  10.973  1.00 49.23
ATOM   19378  CB   THR  2892      53.557  20.713  10.637  1.00 48.82
ATOM   19379  OG1  THR  2892      52.662  21.275  11.603  1.00 49.13
ATOM   19380  CG2  THR  2892      52.937  20.843   9.249  1.00 48.85
ATOM   19381  C    THR  2892      54.740  18.649   9.908  1.00 49.30
ATOM   19382  O    THR  2892      54.280  18.005   8.965  1.00 48.82
ATOM   19383  N    GLU  2893      56.041  18.878  10.056  1.00 49.78
ATOM   19384  CA   GLU  2893      57.007  18.369   9.088  1.00 50.32
ATOM   19385  CB   GLU  2893      58.245  19.268   9.043  1.00 51.93
ATOM   19386  CG   GLU  2893      57.979  20.650   8.460  1.00 54.14
ATOM   19387  CD   GLU  2893      59.255  21.412   8.163  1.00 55.53
ATOM   19388  OE1  GLU  2893      60.036  21.666   9.106  1.00 55.46
ATOM   19389  OE2  GLU  2893      59.477  21.757   6.982  1.00 56.24
ATOM   19390  C    GLU  2893      57.423  16.933   9.381  1.00 49.42
ATOM   19391  O    GLU  2893      57.953  16.243   8.509  1.00 49.42
ATOM   19392  N    ALA  2894      57.174  16.487  10.609  1.00 48.11
ATOM   19393  CA   ALA  2894      57.518  15.131  11.021  1.00 46.74
ATOM   19394  CB   ALA  2894      57.718  15.079  12.531  1.00 46.75
ATOM   19395  C    ALA  2894      56.438  14.135  10.604  1.00 45.44
ATOM   19396  O    ALA  2894      56.721  12.959  10.379  1.00 45.28
ATOM   19397  N    LEU  2895      55.200  14.608  10.500  1.00 44.09
ATOM   19398  CA   LEU  2895      54.097  13.740  10.112  1.00 42.66
ATOM   19399  CB   LEU  2895      52.845  14.067  10.932  1.00 43.61
ATOM   19400  CG   LEU  2895      52.966  13.940  12.450  1.00 43.86
ATOM   19401  CD1  LEU  2895      51.651  14.323  13.105  1.00 44.30
ATOM   19402  CD2  LEU  2895      53.350  12.520  12.814  1.00 45.06
ATOM   19403  C    LEU  2895      53.777  13.884   8.631  1.00 41.50
ATOM   19404  O    LEU  2895      53.887  14.973   8.067  1.00 41.74
ATOM   19405  N    ALA  2896      53.384  12.776   8.009  1.00 39.31
ATOM   19406  CA   ALA  2896      53.020  12.769   6.597  1.00 37.81
ATOM   19407  CB   ALA  2896      53.230  11.380   6.003  1.00 37.19
ATOM   19408  C    ALA  2896      51.558  13.178   6.468  1.00 37.41
ATOM   19409  O    ALA  2896      51.144  13.749   5.458  1.00 35.35
ATOM   19410  N    ILE  2897      50.776  12.874   7.499  1.00 37.72
ATOM   19411  CA   ILE  2897      49.359  13.222   7.510  1.00 37.82
ATOM   19412  CB   ILE  2897      48.589  12.404   8.572  1.00 38.19
ATOM   19413  CG2  ILE  2897      48.562  10.938   8.182  1.00 35.52
ATOM   19414  CG1  ILE  2897      49.237  12.602   9.947  1.00 36.77
ATOM   19415  CD1  ILE  2897      48.490  11.937  11.083  1.00 38.83
ATOM   19416  C    ILE  2897      49.202  14.706   7.825  1.00 38.40
ATOM   19417  O    ILE  2897      49.987  15.274   8.585  1.00 37.92
ATOM   19418  N    PRO  2898      48.180  15.354   7.247  1.00 38.51
ATOM   19419  CD   PRO  2898      47.116  14.796   6.397  1.00 38.81
ATOM   19420  CA   PRO  2898      47.953  16.781   7.492  1.00 39.39
ATOM   19421  CB   PRO  2898      46.729  17.090   6.629  1.00 39.31
ATOM   19422  CG   PRO  2898      46.001  15.787   6.601  1.00 40.01
ATOM   19423  C    PRO  2898      47.730  17.097   8.968  1.00 40.59
ATOM   19424  O    PRO  2898      46.998  16.391   9.665  1.00 40.56
ATOM   19425  N    VAL  2899      48.375  18.158   9.441  1.00 40.40
ATOM   19426  CA   VAL  2899      48.252  18.569  10.832  1.00 40.89
ATOM   19427  CB   VAL  2899      49.641  18.739  11.484  1.00 41.08
ATOM   19428  CG1  VAL  2899      49.487  19.099  12.952  1.00 40.58
ATOM   19429  CG2  VAL  2899      50.442  17.457  11.334  1.00 41.04
ATOM   19430  C    VAL  2899      47.489  19.882  10.942  1.00 41.61
ATOM   19431  O    VAL  2899      48.002  20.946  10.594  1.00 42.66
ATOM   19432  N    ILE  2900      46.254  19.797  11.424  1.00 41.85
```

```
ATOM   19433  CA   ILE   2900      45.409  20.973  11.588  1.00 40.80
ATOM   19434  CB   ILE   2900      43.918  20.589  11.510  1.00 40.42
ATOM   19435  CG2  ILE   2900      43.046  21.818  11.739  1.00 40.48
ATOM   19436  CG1  ILE   2900      43.627  19.954  10.146  1.00 40.12
ATOM   19437  CD1  ILE   2900      42.223  19.401  10.000  1.00 38.79
ATOM   19438  C    ILE   2900      45.701  21.599  12.943  1.00 40.37
ATOM   19439  O    ILE   2900      45.760  20.902  13.955  1.00 40.86
ATOM   19440  N    GLY   2901      45.892  22.913  12.964  1.00 40.33
ATOM   19441  CA   GLY   2901      46.189  23.576  14.219  1.00 39.83
ATOM   19442  C    GLY   2901      45.312  24.771  14.534  1.00 39.82
ATOM   19443  O    GLY   2901      44.743  25.400  13.644  1.00 39.28
ATOM   19444  N    ILE   2902      45.198  25.071  15.822  1.00 40.24
ATOM   19445  CA   ILE   2902      44.414  26.203  16.287  1.00 41.59
ATOM   19446  CB   ILE   2902      43.043  25.758  16.859  1.00 41.56
ATOM   19447  CG2  ILE   2902      43.232  24.634  17.871  1.00 39.96
ATOM   19448  CG1  ILE   2902      42.333  26.957  17.490  1.00 42.23
ATOM   19449  CD1  ILE   2902      40.886  26.696  17.857  1.00 42.44
ATOM   19450  C    ILE   2902      45.225  26.913  17.364  1.00 42.95
ATOM   19451  O    ILE   2902      45.405  26.397  18.468  1.00 41.71
ATOM   19452  N    GLY   2903      45.729  28.096  17.027  1.00 44.58
ATOM   19453  CA   GLY   2903      46.535  28.845  17.972  1.00 45.63
ATOM   19454  C    GLY   2903      47.918  28.234  18.068  1.00 46.17
ATOM   19455  O    GLY   2903      48.531  28.218  19.136  1.00 46.79
ATOM   19456  N    ALA   2904      48.407  27.722  16.942  1.00 46.61
ATOM   19457  CA   ALA   2904      49.725  27.102  16.887  1.00 46.93
ATOM   19458  CB   ALA   2904      49.584  25.594  16.723  1.00 46.40
ATOM   19459  C    ALA   2904      50.565  27.674  15.749  1.00 46.66
ATOM   19460  O    ALA   2904      51.652  27.174  15.461  1.00 46.67
ATOM   19461  N    GLY   2905      50.056  28.718  15.100  1.00 47.11
ATOM   19462  CA   GLY   2905      50.786  29.331  14.004  1.00 47.45
ATOM   19463  C    GLY   2905      50.290  28.905  12.634  1.00 48.01
ATOM   19464  O    GLY   2905      49.434  28.027  12.517  1.00 48.29
ATOM   19465  N    ASN   2906      50.832  29.528  11.591  1.00 47.47
ATOM   19466  CA   ASN   2906      50.439  29.213  10.221  1.00 47.27
ATOM   19467  CB   ASN   2906      50.423  30.488   9.373  1.00 46.79
ATOM   19468  CG   ASN   2906      51.771  31.187   9.346  1.00 46.59
ATOM   19469  OD1  ASN   2906      51.940  32.206   8.674  1.00 47.15
ATOM   19470  ND2  ASN   2906      52.736  30.644  10.079  1.00 45.79
ATOM   19471  C    ASN   2906      51.374  28.190   9.585  1.00 47.11
ATOM   19472  O    ASN   2906      51.368  28.002   8.366  1.00 46.64
ATOM   19473  N    VAL   2907      52.173  27.530  10.418  1.00 47.09
ATOM   19474  CA   VAL   2907      53.118  26.526   9.941  1.00 47.56
ATOM   19475  CB   VAL   2907      54.234  26.269  10.980  1.00 48.05
ATOM   19476  CG1  VAL   2907      55.286  25.336  10.394  1.00 49.38
ATOM   19477  CG2  VAL   2907      54.866  27.584  11.404  1.00 48.66
ATOM   19478  C    VAL   2907      52.415  25.204   9.645  1.00 47.40
ATOM   19479  O    VAL   2907      52.875  24.419   8.816  1.00 46.82
ATOM   19480  N    THR   2908      51.299  24.965  10.326  1.00 46.84
ATOM   19481  CA   THR   2908      50.538  23.737  10.134  1.00 46.83
ATOM   19482  CB   THR   2908      49.387  23.644  11.145  1.00 46.34
ATOM   19483  OG1  THR   2908      48.608  24.845  11.091  1.00 47.58
ATOM   19484  CG2  THR   2908      49.932  23.460  12.550  1.00 45.22
ATOM   19485  C    THR   2908      49.966  23.646   8.722  1.00 47.30
ATOM   19486  O    THR   2908      49.862  24.649   8.013  1.00 47.83
ATOM   19487  N    ASP   2909      49.598  22.436   8.318  1.00 46.81
ATOM   19488  CA   ASP   2909      49.047  22.204   6.989  1.00 47.02
ATOM   19489  CB   ASP   2909      48.974  20.700   6.718  1.00 47.68
ATOM   19490  CG   ASP   2909      50.313  20.009   6.906  1.00 48.92
ATOM   19491  OD1  ASP   2909      51.248  20.299   6.127  1.00 49.06
ATOM   19492  OD2  ASP   2909      50.432  19.182   7.836  1.00 47.98
ATOM   19493  C    ASP   2909      47.666  22.831   6.832  1.00 47.23
ATOM   19494  O    ASP   2909      47.219  23.110   5.717  1.00 46.70
ATOM   19495  N    GLY   2910      46.995  23.057   7.956  1.00 46.85
ATOM   19496  CA   GLY   2910      45.672  23.650   7.914  1.00 46.10
ATOM   19497  C    GLY   2910      45.335  24.437   9.163  1.00 45.53
ATOM   19498  O    GLY   2910      46.113  24.473  10.115  1.00 44.71
ATOM   19499  N    GLN   2911      44.166  25.067   9.157  1.00 45.89
ATOM   19500  CA   GLN   2911      43.712  25.863  10.292  1.00 46.51
ATOM   19501  CB   GLN   2911      43.873  27.357   9.990  1.00 46.39
ATOM   19502  CG   GLN   2911      45.315  27.843   9.878  1.00 44.82
ATOM   19503  CD   GLN   2911      46.100  27.649  11.162  1.00 44.00
ATOM   19504  OE1  GLN   2911      45.634  27.997  12.246  1.00 43.65
ATOM   19505  NE2  GLN   2911      47.305  27.103  11.043  1.00 44.12
ATOM   19506  C    GLN   2911      42.250  25.577  10.619  1.00 47.63
ATOM   19507  O    GLN   2911      41.487  25.114   9.771  1.00 46.88
ATOM   19508  N    ILE   2912      41.867  25.853  11.860  1.00 48.52
ATOM   19509  CA   ILE   2912      40.492  25.652  12.290  1.00 50.21
```

```
ATOM   19510  CB   ILE  2912      40.320  24.298  13.023  1.00 50.95
ATOM   19511  CG2  ILE  2912      41.195  24.257  14.270  1.00 51.75
ATOM   19512  CG1  ILE  2912      38.849  24.088  13.376  1.00 51.34
ATOM   19513  CD1  ILE  2912      38.484  22.641  13.645  1.00 52.84
ATOM   19514  C    ILE  2912      40.093  26.806  13.205  1.00 50.85
ATOM   19515  O    ILE  2912      40.870  27.222  14.066  1.00 51.15
ATOM   19516  N    LEU  2913      38.889  27.334  13.005  1.00 51.43
ATOM   19517  CA   LEU  2913      38.417  28.456  13.808  1.00 51.62
ATOM   19518  CB   LEU  2913      38.566  29.760  13.012  1.00 52.42
ATOM   19519  CG   LEU  2913      39.031  31.024  13.747  1.00 53.65
ATOM   19520  CD1  LEU  2913      39.235  32.140  12.739  1.00 53.91
ATOM   19521  CD2  LEU  2913      38.016  31.436  14.802  1.00 54.69
ATOM   19522  C    LEU  2913      36.964  28.277  14.240  1.00 50.63
ATOM   19523  O    LEU  2913      36.170  27.629  13.553  1.00 50.30
ATOM   19524  N    VAL  2914      36.627  28.853  15.389  1.00 49.32
ATOM   19525  CA   VAL  2914      35.274  28.778  15.922  1.00 47.68
ATOM   19526  CB   VAL  2914      35.275  28.908  17.455  1.00 48.06
ATOM   19527  CG1  VAL  2914      33.877  28.658  18.003  1.00 49.28
ATOM   19528  CG2  VAL  2914      36.268  27.930  18.050  1.00 47.75
ATOM   19529  C    VAL  2914      34.463  29.920  15.324  1.00 46.26
ATOM   19530  O    VAL  2914      34.721  31.092  15.601  1.00 45.66
ATOM   19531  N    MET  2915      33.486  29.570  14.496  1.00 43.97
ATOM   19532  CA   MET  2915      32.649  30.563  13.839  1.00 42.92
ATOM   19533  CB   MET  2915      31.500  29.873  13.106  1.00 40.64
ATOM   19534  CG   MET  2915      30.616  29.023  14.000  1.00 38.03
ATOM   19535  SD   MET  2915      28.938  28.996  13.368  1.00 33.08
ATOM   19536  CE   MET  2915      28.260  30.449  14.185  1.00 34.77
ATOM   19537  C    MET  2915      32.087  31.596  14.813  1.00 42.94
ATOM   19538  O    MET  2915      31.937  32.766  14.468  1.00 43.50
ATOM   19539  N    HIS  2916      31.778  31.156  16.028  1.00 43.84
ATOM   19540  CA   HIS  2916      31.228  32.041  17.047  1.00 43.99
ATOM   19541  CB   HIS  2916      30.839  31.221  18.279  1.00 43.48
ATOM   19542  CG   HIS  2916      29.606  30.396  18.080  1.00 42.85
ATOM   19543  CD2  HIS  2916      29.446  29.097  17.733  1.00 42.66
ATOM   19544  ND1  HIS  2916      28.336  30.925  18.176  1.00 42.76
ATOM   19545  CE1  HIS  2916      27.448  29.988  17.897  1.00 42.12
ATOM   19546  NE2  HIS  2916      28.095  28.870  17.624  1.00 42.80
ATOM   19547  C    HIS  2916      32.192  33.165  17.424  1.00 45.02
ATOM   19548  O    HIS  2916      31.772  34.232  17.871  1.00 43.97
ATOM   19549  N    ASP  2917      33.485  32.924  17.238  1.00 46.22
ATOM   19550  CA   ASP  2917      34.493  33.931  17.539  1.00 47.60
ATOM   19551  CB   ASP  2917      35.702  33.296  18.227  1.00 48.54
ATOM   19552  CG   ASP  2917      35.463  33.045  19.699  1.00 49.88
ATOM   19553  OD1  ASP  2917      35.083  34.002  20.404  1.00 51.64
ATOM   19554  OD2  ASP  2917      35.658  31.901  20.156  1.00 51.53
ATOM   19555  C    ASP  2917      34.938  34.638  16.266  1.00 47.64
ATOM   19556  O    ASP  2917      35.581  35.685  16.317  1.00 49.23
ATOM   19557  N    ALA  2918      34.587  34.060  15.123  1.00 47.15
ATOM   19558  CA   ALA  2918      34.944  34.631  13.833  1.00 46.36
ATOM   19559  CB   ALA  2918      34.938  33.551  12.764  1.00 45.96
ATOM   19560  C    ALA  2918      33.965  35.736  13.463  1.00 46.60
ATOM   19561  O    ALA  2918      34.275  36.607  12.651  1.00 45.86
ATOM   19562  N    PHE  2919      32.780  35.696  14.063  1.00 45.95
ATOM   19563  CA   PHE  2919      31.762  36.699  13.794  1.00 46.21
ATOM   19564  CB   PHE  2919      30.492  36.027  13.274  1.00 47.19
ATOM   19565  CG   PHE  2919      30.738  35.054  12.157  1.00 48.64
ATOM   19566  CD1  PHE  2919      31.476  35.427  11.038  1.00 49.33
ATOM   19567  CD2  PHE  2919      30.224  33.764  12.219  1.00 49.14
ATOM   19568  CE1  PHE  2919      31.698  34.527   9.996  1.00 49.77
ATOM   19569  CE2  PHE  2919      30.440  32.857  11.183  1.00 49.47
ATOM   19570  CZ   PHE  2919      31.177  33.239  10.070  1.00 49.73
ATOM   19571  C    PHE  2919      31.450  37.498  15.051  1.00 45.77
ATOM   19572  O    PHE  2919      30.435  38.193  15.122  1.00 45.54
ATOM   19573  N    GLY  2920      32.332  37.394  16.041  1.00 45.81
ATOM   19574  CA   GLY  2920      32.142  38.112  17.289  1.00 46.37
ATOM   19575  C    GLY  2920      30.782  37.867  17.909  1.00 46.48
ATOM   19576  O    GLY  2920      30.207  38.760  18.530  1.00 45.85
ATOM   19577  N    ILE  2921      30.268  36.653  17.741  1.00 46.20
ATOM   19578  CA   ILE  2921      28.965  36.290  18.286  1.00 47.25
ATOM   19579  CB   ILE  2921      28.450  34.974  17.665  1.00 46.36
ATOM   19580  CG2  ILE  2921      27.066  34.651  18.210  1.00 46.13
ATOM   19581  CG1  ILE  2921      28.410  35.101  16.140  1.00 46.06
ATOM   19582  CD1  ILE  2921      28.049  33.815  15.420  1.00 45.17
ATOM   19583  C    ILE  2921      29.040  36.120  19.801  1.00 48.32
ATOM   19584  O    ILE  2921      28.137  36.534  20.526  1.00 47.30
ATOM   19585  N    THR  2922      30.126  35.515  20.271  1.00 50.35
ATOM   19586  CA   THR  2922      30.316  35.285  21.696  1.00 53.99
```

```
ATOM   19587  CB   THR  2922      31.599  34.487  21.960  1.00 53.75
ATOM   19588  OG1  THR  2922      32.721  35.209  21.442  1.00 55.46
ATOM   19589  CG2  THR  2922      31.524  33.127  21.287  1.00 53.60
ATOM   19590  C    THR  2922      30.394  36.593  22.476  1.00 56.52
ATOM   19591  O    THR  2922      30.209  37.673  21.915  1.00 57.67
ATOM   19592  N    GLY  2923      30.672  36.483  23.772  1.00 58.60
ATOM   19593  CA   GLY  2923      30.768  37.657  24.622  1.00 61.66
ATOM   19594  C    GLY  2923      31.545  38.803  24.004  1.00 63.68
ATOM   19595  O    GLY  2923      30.961  39.699  23.394  1.00 64.36
ATOM   19596  N    GLY  2924      32.864  38.779  24.162  1.00 64.67
ATOM   19597  CA   GLY  2924      33.688  39.835  23.607  1.00 66.50
ATOM   19598  C    GLY  2924      35.161  39.619  23.880  1.00 67.68
ATOM   19599  O    GLY  2924      36.015  39.989  23.072  1.00 68.28
ATOM   19600  N    HIS  2925      35.461  39.018  25.026  1.00 68.21
ATOM   19601  CA   HIS  2925      36.839  38.748  25.410  1.00 68.98
ATOM   19602  CB   HIS  2925      36.922  38.531  26.924  1.00 70.40
ATOM   19603  CG   HIS  2925      36.513  39.726  27.730  1.00 71.99
ATOM   19604  CD2  HIS  2925      35.508  39.900  28.620  1.00 72.41
ATOM   19605  ND1  HIS  2925      37.178  40.932  27.662  1.00 72.60
ATOM   19606  CE1  HIS  2925      36.601  41.797  28.477  1.00 72.46
ATOM   19607  NE2  HIS  2925      35.585  41.197  29.070  1.00 72.60
ATOM   19608  C    HIS  2925      37.384  37.524  24.674  1.00 68.50
ATOM   19609  O    HIS  2925      37.745  36.524  25.294  1.00 68.44
ATOM   19610  N    ILE  2926      37.442  37.613  23.348  1.00 67.83
ATOM   19611  CA   ILE  2926      37.940  36.516  22.524  1.00 67.07
ATOM   19612  CB   ILE  2926      37.816  36.838  21.019  1.00 67.36
ATOM   19613  CG2  ILE  2926      36.353  37.011  20.641  1.00 67.76
ATOM   19614  CG1  ILE  2926      38.613  38.102  20.691  1.00 67.33
ATOM   19615  CD1  ILE  2926      38.682  38.416  19.212  1.00 67.17
ATOM   19616  C    ILE  2926      39.406  36.224  22.827  1.00 66.38
ATOM   19617  O    ILE  2926      40.136  37.094  23.300  1.00 66.76
ATOM   19618  N    PRO  2927      39.856  34.987  22.557  1.00 65.66
ATOM   19619  CD   PRO  2927      39.075  33.857  22.023  1.00 65.23
ATOM   19620  CA   PRO  2927      41.244  34.585  22.804  1.00 64.79
ATOM   19621  CB   PRO  2927      41.198  33.073  22.613  1.00 65.30
ATOM   19622  CG   PRO  2927      40.158  32.914  21.553  1.00 65.30
ATOM   19623  C    PRO  2927      42.229  35.261  21.854  1.00 64.22
ATOM   19624  O    PRO  2927      41.838  35.812  20.824  1.00 63.39
ATOM   19625  N    LYS  2928      43.509  35.210  22.206  1.00 63.55
ATOM   19626  CA   LYS  2928      44.552  35.820  21.392  1.00 63.10
ATOM   19627  CB   LYS  2928      45.862  35.910  22.182  1.00 63.96
ATOM   19628  CG   LYS  2928      45.893  36.997  23.252  1.00 64.57
ATOM   19629  CD   LYS  2928      44.948  36.705  24.408  1.00 65.11
ATOM   19630  CE   LYS  2928      45.029  37.801  25.466  1.00 65.21
ATOM   19631  NZ   LYS  2928      44.169  37.518  26.651  1.00 64.88
ATOM   19632  C    LYS  2928      44.803  35.067  20.091  1.00 62.38
ATOM   19633  O    LYS  2928      45.363  35.622  19.145  1.00 62.12
ATOM   19634  N    PHE  2929      44.387  33.806  20.043  1.00 61.22
ATOM   19635  CA   PHE  2929      44.586  32.993  18.850  1.00 59.91
ATOM   19636  CB   PHE  2929      44.905  31.550  19.248  1.00 59.84
ATOM   19637  CG   PHE  2929      43.882  30.926  20.154  1.00 60.10
ATOM   19638  CD1  PHE  2929      42.659  30.490  19.655  1.00 60.07
ATOM   19639  CD2  PHE  2929      44.144  30.772  21.511  1.00 60.02
ATOM   19640  CE1  PHE  2929      41.711  29.907  20.494  1.00 59.46
ATOM   19641  CE2  PHE  2929      43.202  30.191  22.358  1.00 60.29
ATOM   19642  CZ   PHE  2929      41.983  29.758  21.848  1.00 59.76
ATOM   19643  C    PHE  2929      43.393  33.028  17.904  1.00 59.23
ATOM   19644  O    PHE  2929      43.370  32.321  16.897  1.00 59.32
ATOM   19645  N    ALA  2930      42.409  33.863  18.227  1.00 57.98
ATOM   19646  CA   ALA  2930      41.212  33.995  17.404  1.00 56.99
ATOM   19647  CB   ALA  2930      39.967  33.889  18.273  1.00 56.84
ATOM   19648  C    ALA  2930      41.217  35.324  16.662  1.00 56.37
ATOM   19649  O    ALA  2930      42.091  36.161  16.876  1.00 56.26
ATOM   19650  N    LYS  2931      40.236  35.517  15.788  1.00 56.19
ATOM   19651  CA   LYS  2931      40.140  36.753  15.022  1.00 56.47
ATOM   19652  CB   LYS  2931      41.140  36.734  13.862  1.00 56.43
ATOM   19653  CG   LYS  2931      41.165  38.013  13.037  1.00 56.84
ATOM   19654  CD   LYS  2931      42.212  37.935  11.939  1.00 57.32
ATOM   19655  CE   LYS  2931      42.283  39.226  11.137  1.00 57.79
ATOM   19656  NZ   LYS  2931      43.308  39.151  10.053  1.00 57.52
ATOM   19657  C    LYS  2931      38.730  36.963  14.481  1.00 56.42
ATOM   19658  O    LYS  2931      38.137  36.059  13.892  1.00 56.44
ATOM   19659  N    ASN  2932      38.202  38.165  14.687  1.00 56.03
ATOM   19660  CA   ASN  2932      36.867  38.510  14.220  1.00 55.89
ATOM   19661  CB   ASN  2932      36.274  39.617  15.095  1.00 55.63
ATOM   19662  CG   ASN  2932      34.795  39.827  14.847  1.00 55.62
ATOM   19663  OD1  ASN  2932      34.324  39.747  13.711  1.00 55.34
```

```
ATOM   19664  ND2 ASN   2932      34.053  40.111  15.911  1.00 55.48
ATOM   19665  C   ASN   2932      36.946  38.999  12.777  1.00 56.13
ATOM   19666  O   ASN   2932      37.269  40.160  12.527  1.00 56.78
ATOM   19667  N   PHE   2933      36.656  38.115  11.829  1.00 56.14
ATOM   19668  CA  PHE   2933      36.697  38.482  10.422  1.00 57.27
ATOM   19669  CB  PHE   2933      36.817  37.234   9.543  1.00 57.12
ATOM   19670  CG  PHE   2933      38.141  36.540   9.658  1.00 57.30
ATOM   19671  CD1 PHE   2933      38.472  35.829  10.807  1.00 56.85
ATOM   19672  CD2 PHE   2933      39.073  36.621   8.627  1.00 57.13
ATOM   19673  CE1 PHE   2933      39.713  35.209  10.927  1.00 57.60
ATOM   19674  CE2 PHE   2933      40.315  36.006   8.737  1.00 57.30
ATOM   19675  CZ  PHE   2933      40.637  35.299   9.889  1.00 57.81
ATOM   19676  C   PHE   2933      35.471  39.284  10.009  1.00 58.04
ATOM   19677  O   PHE   2933      35.464  39.925   8.957  1.00 58.08
ATOM   19678  N   LEU   2934      34.432  39.242  10.837  1.00 59.10
ATOM   19679  CA  LEU   2934      33.205  39.980  10.556  1.00 59.92
ATOM   19680  CB  LEU   2934      32.050  39.449  11.409  1.00 58.78
ATOM   19681  CG  LEU   2934      30.721  40.200  11.278  1.00 58.03
ATOM   19682  CD1 LEU   2934      30.222  40.120   9.844  1.00 57.10
ATOM   19683  CD2 LEU   2934      29.698  39.610  12.232  1.00 57.76
ATOM   19684  C   LEU   2934      33.426  41.454  10.864  1.00 61.04
ATOM   19685  O   LEU   2934      32.864  42.326  10.204  1.00 61.19
ATOM   19686  N   ALA   2935      34.247  41.721  11.874  1.00 62.38
ATOM   19687  CA  ALA   2935      34.552  43.086  12.274  1.00 64.22
ATOM   19688  CB  ALA   2935      35.328  43.085  13.583  1.00 63.92
ATOM   19689  C   ALA   2935      35.362  43.775  11.182  1.00 65.41
ATOM   19690  O   ALA   2935      35.204  44.972  10.935  1.00 65.96
ATOM   19691  N   GLU   2936      36.229  43.005  10.529  1.00 66.66
ATOM   19692  CA  GLU   2936      37.070  43.523   9.454  1.00 67.61
ATOM   19693  CB  GLU   2936      38.167  42.511   9.105  1.00 68.36
ATOM   19694  CG  GLU   2936      38.961  41.982  10.294  1.00 69.12
ATOM   19695  CD  GLU   2936      39.699  43.070  11.051  1.00 69.89
ATOM   19696  OE1 GLU   2936      39.034  43.903  11.703  1.00 70.02
ATOM   19697  OE2 GLU   2936      40.948  43.094  10.989  1.00 70.26
ATOM   19698  C   GLU   2936      36.216  43.788   8.217  1.00 67.80
ATOM   19699  O   GLU   2936      36.719  44.238   7.187  1.00 67.71
ATOM   19700  N   THR   2937      34.923  43.497   8.328  1.00 67.74
ATOM   19701  CA  THR   2937      33.988  43.696   7.228  1.00 67.18
ATOM   19702  CB  THR   2937      33.961  42.455   6.306  1.00 67.51
ATOM   19703  OG1 THR   2937      33.149  42.726   5.157  1.00 67.78
ATOM   19704  CG2 THR   2937      33.399  41.249   7.048  1.00 67.76
ATOM   19705  C   THR   2937      32.577  43.974   7.757  1.00 66.84
ATOM   19706  O   THR   2937      32.410  44.481   8.869  1.00 66.83
ATOM   19707  N   GLY   2938      31.565  43.650   6.958  1.00 66.24
ATOM   19708  CA  GLY   2938      30.192  43.873   7.374  1.00 65.54
ATOM   19709  C   GLY   2938      29.275  42.763   6.899  1.00 64.98
ATOM   19710  O   GLY   2938      28.054  42.842   7.043  1.00 64.61
ATOM   19711  N   ASP   2939      29.874  41.721   6.331  1.00 64.32
ATOM   19712  CA  ASP   2939      29.123  40.582   5.822  1.00 63.45
ATOM   19713  CB  ASP   2939      29.128  40.595   4.291  1.00 64.45
ATOM   19714  CG  ASP   2939      28.216  39.544   3.698  1.00 65.72
ATOM   19715  OD1 ASP   2939      28.488  38.340   3.889  1.00 66.50
ATOM   19716  OD2 ASP   2939      27.222  39.924   3.042  1.00 66.35
ATOM   19717  C   ASP   2939      29.725  39.277   6.336  1.00 62.43
ATOM   19718  O   ASP   2939      30.928  39.044   6.209  1.00 61.79
ATOM   19719  N   ILE   2940      28.878  38.433   6.920  1.00 61.10
ATOM   19720  CA  ILE   2940      29.310  37.148   7.463  1.00 59.37
ATOM   19721  CB  ILE   2940      28.105  36.342   8.007  1.00 59.30
ATOM   19722  CG2 ILE   2940      28.577  34.996   8.539  1.00 59.02
ATOM   19723  CG1 ILE   2940      27.404  37.136   9.113  1.00 59.59
ATOM   19724  CD1 ILE   2940      26.152  36.472   9.656  1.00 59.03
ATOM   19725  C   ILE   2940      30.026  36.308   6.408  1.00 58.22
ATOM   19726  O   ILE   2940      31.116  35.792   6.652  1.00 57.54
ATOM   19727  N   ARG   2941      29.407  36.171   5.240  1.00 57.25
ATOM   19728  CA  ARG   2941      29.991  35.395   4.154  1.00 56.77
ATOM   19729  CB  ARG   2941      29.033  35.348   2.963  1.00 55.80
ATOM   19730  CG  ARG   2941      27.778  34.525   3.206  1.00 53.72
ATOM   19731  CD  ARG   2941      26.838  34.590   2.013  1.00 52.37
ATOM   19732  NE  ARG   2941      25.691  33.698   2.165  1.00 51.33
ATOM   19733  CZ  ARG   2941      24.805  33.775   3.153  1.00 50.67
ATOM   19734  NH1 ARG   2941      24.927  34.706   4.089  1.00 50.47
ATOM   19735  NH2 ARG   2941      23.793  32.919   3.204  1.00 50.57
ATOM   19736  C   ARG   2941      31.328  35.986   3.721  1.00 57.51
ATOM   19737  O   ARG   2941      32.278  35.254   3.441  1.00 58.07
ATOM   19738  N   ALA   2942      31.394  37.313   3.666  1.00 57.53
ATOM   19739  CA  ALA   2942      32.618  38.001   3.275  1.00 57.14
ATOM   19740  CB  ALA   2942      32.384  39.506   3.243  1.00 57.24
```

```
ATOM  19741  C    ALA  2942    33.729  37.663   4.262  1.00 56.97
ATOM  19742  O    ALA  2942    34.882  37.475   3.874  1.00 57.28
ATOM  19743  N    ALA  2943    33.372  37.584   5.540  1.00 56.48
ATOM  19744  CA   ALA  2943    34.338  37.263   6.583  1.00 56.25
ATOM  19745  CB   ALA  2943    33.679  37.359   7.950  1.00 56.65
ATOM  19746  C    ALA  2943    34.896  35.861   6.368  1.00 56.16
ATOM  19747  O    ALA  2943    36.044  35.583   6.712  1.00 56.09
ATOM  19748  N    VAL  2944    34.077  34.984   5.792  1.00 56.16
ATOM  19749  CA   VAL  2944    34.485  33.609   5.526  1.00 55.63
ATOM  19750  CB   VAL  2944    33.279  32.735   5.106  1.00 56.09
ATOM  19751  CG1  VAL  2944    33.745  31.318   4.801  1.00 55.49
ATOM  19752  CG2  VAL  2944    32.234  32.722   6.213  1.00 55.66
ATOM  19753  C    VAL  2944    35.532  33.557   4.420  1.00 55.75
ATOM  19754  O    VAL  2944    36.568  32.909   4.569  1.00 55.47
ATOM  19755  N    ARG  2945    35.257  34.238   3.311  1.00 55.89
ATOM  19756  CA   ARG  2945    36.188  34.264   2.189  1.00 55.76
ATOM  19757  CB   ARG  2945    35.622  35.094   1.034  1.00 55.60
ATOM  19758  CG   ARG  2945    34.413  34.471   0.356  1.00 56.71
ATOM  19759  CD   ARG  2945    34.101  35.175  -0.956  1.00 57.24
ATOM  19760  NE   ARG  2945    33.775  36.585  -0.762  1.00 57.48
ATOM  19761  CZ   ARG  2945    32.653  37.024  -0.199  1.00 57.88
ATOM  19762  NH1  ARG  2945    31.740  36.163   0.228  1.00 57.99
ATOM  19763  NH2  ARG  2945    32.445  38.327  -0.061  1.00 57.70
ATOM  19764  C    ARG  2945    37.532  34.836   2.617  1.00 55.48
ATOM  19765  O    ARG  2945    38.585  34.335   2.216  1.00 55.77
ATOM  19766  N    GLN  2946    37.491  35.886   3.431  1.00 54.96
ATOM  19767  CA   GLN  2946    38.710  36.520   3.918  1.00 54.60
ATOM  19768  CB   GLN  2946    38.368  37.747   4.769  1.00 55.75
ATOM  19769  CG   GLN  2946    39.574  38.580   5.179  1.00 57.10
ATOM  19770  CD   GLN  2946    39.215  39.681   6.161  1.00 58.43
ATOM  19771  OE1  GLN  2946    38.307  40.478   5.917  1.00 59.03
ATOM  19772  NE2  GLN  2946    39.932  39.733   7.279  1.00 58.79
ATOM  19773  C    GLN  2946    39.482  35.509   4.757  1.00 53.60
ATOM  19774  O    GLN  2946    40.707  35.416   4.670  1.00 53.90
ATOM  19775  N    TYR  2947    38.752  34.754   5.571  1.00 52.23
ATOM  19776  CA   TYR  2947    39.350  33.736   6.426  1.00 50.90
ATOM  19777  CB   TYR  2947    38.267  33.086   7.291  1.00 49.81
ATOM  19778  CG   TYR  2947    38.721  31.849   8.030  1.00 48.86
ATOM  19779  CD1  TYR  2947    39.824  31.887   8.882  1.00 48.05
ATOM  19780  CE1  TYR  2947    40.240  30.751   9.570  1.00 48.01
ATOM  19781  CD2  TYR  2947    38.042  30.639   7.884  1.00 48.25
ATOM  19782  CE2  TYR  2947    38.449  29.497   8.567  1.00 47.92
ATOM  19783  CZ   TYR  2947    39.548  29.559   9.408  1.00 48.00
ATOM  19784  OH   TYR  2947    39.957  28.434  10.087  1.00 46.78
ATOM  19785  C    TYR  2947    40.045  32.679   5.574  1.00 50.61
ATOM  19786  O    TYR  2947    41.195  32.315   5.828  1.00 50.43
ATOM  19787  N    MET  2948    39.333  32.194   4.562  1.00 50.53
ATOM  19788  CA   MET  2948    39.856  31.183   3.652  1.00 50.34
ATOM  19789  CB   MET  2948    38.785  30.803   2.627  1.00 50.02
ATOM  19790  CG   MET  2948    37.518  30.204   3.220  1.00 47.76
ATOM  19791  SD   MET  2948    36.190  30.122   1.998  1.00 48.64
ATOM  19792  CE   MET  2948    36.932  29.063   0.769  1.00 48.77
ATOM  19793  C    MET  2948    41.094  31.701   2.921  1.00 51.03
ATOM  19794  O    MET  2948    42.109  31.008   2.827  1.00 51.21
ATOM  19795  N    ALA  2949    41.001  32.923   2.407  1.00 50.88
ATOM  19796  CA   ALA  2949    42.103  33.533   1.674  1.00 51.33
ATOM  19797  CB   ALA  2949    41.640  34.835   1.033  1.00 51.05
ATOM  19798  C    ALA  2949    43.328  33.789   2.547  1.00 51.80
ATOM  19799  O    ALA  2949    44.457  33.528   2.128  1.00 52.35
ATOM  19800  N    GLU  2950    43.112  34.296   3.758  1.00 52.03
ATOM  19801  CA   GLU  2950    44.222  34.583   4.662  1.00 52.73
ATOM  19802  CB   GLU  2950    43.735  35.373   5.880  1.00 52.54
ATOM  19803  CG   GLU  2950    43.593  36.864   5.622  1.00 53.18
ATOM  19804  CD   GLU  2950    43.213  37.643   6.867  1.00 53.56
ATOM  19805  OE1  GLU  2950    43.847  37.429   7.923  1.00 53.35
ATOM  19806  OE2  GLU  2950    42.287  38.478   6.787  1.00 54.33
ATOM  19807  C    GLU  2950    44.971  33.340   5.128  1.00 53.26
ATOM  19808  O    GLU  2950    46.168  33.404   5.413  1.00 53.12
ATOM  19809  N    VAL  2951    44.272  32.213   5.210  1.00 53.26
ATOM  19810  CA   VAL  2951    44.903  30.971   5.641  1.00 53.29
ATOM  19811  CB   VAL  2951    43.849  29.891   5.970  1.00 53.31
ATOM  19812  CG1  VAL  2951    44.533  28.561   6.259  1.00 53.04
ATOM  19813  CG2  VAL  2951    43.025  30.327   7.174  1.00 52.46
ATOM  19814  C    VAL  2951    45.849  30.442   4.568  1.00 53.26
ATOM  19815  O    VAL  2951    47.012  30.145   4.847  1.00 53.25
ATOM  19816  N    GLU  2952    45.348  30.328   3.342  1.00 53.64
ATOM  19817  CA   GLU  2952    46.157  29.835   2.232  1.00 54.22
```

```
ATOM   19818  CB   GLU   2952      45.328  29.793   0.947  1.00 54.72
ATOM   19819  CG   GLU   2952      46.082  29.252  -0.261  1.00 55.51
ATOM   19820  CD   GLU   2952      45.257  29.300  -1.532  1.00 56.73
ATOM   19821  OE1  GLU   2952      45.774  28.890  -2.594  1.00 57.69
ATOM   19822  OE2  GLU   2952      44.092  29.750  -1.473  1.00 56.56
ATOM   19823  C    GLU   2952      47.370  30.730   2.023  1.00 54.22
ATOM   19824  O    GLU   2952      48.430  30.266   1.608  1.00 54.53
ATOM   19825  N    SER   2953      47.202  32.015   2.318  1.00 54.17
ATOM   19826  CA   SER   2953      48.272  32.993   2.162  1.00 54.43
ATOM   19827  CB   SER   2953      47.690  34.407   2.129  1.00 54.29
ATOM   19828  OG   SER   2953      46.736  34.542   1.092  1.00 56.12
ATOM   19829  C    SER   2953      49.279  32.892   3.297  1.00 54.04
ATOM   19830  O    SER   2953      50.487  32.943   3.074  1.00 54.27
ATOM   19831  N    GLY   2954      48.771  32.750   4.516  1.00 53.77
ATOM   19832  CA   GLY   2954      49.642  32.657   5.672  1.00 53.06
ATOM   19833  C    GLY   2954      49.442  33.832   6.609  1.00 52.88
ATOM   19834  O    GLY   2954      49.975  33.854   7.719  1.00 51.86
ATOM   19835  N    VAL   2955      48.670  34.815   6.156  1.00 52.98
ATOM   19836  CA   VAL   2955      48.388  36.003   6.953  1.00 53.65
ATOM   19837  CB   VAL   2955      47.426  36.952   6.214  1.00 54.01
ATOM   19838  CG1  VAL   2955      47.201  38.208   7.039  1.00 53.59
ATOM   19839  CG2  VAL   2955      47.990  37.300   4.846  1.00 54.14
ATOM   19840  C    VAL   2955      47.756  35.606   8.281  1.00 54.39
ATOM   19841  O    VAL   2955      48.003  36.236   9.309  1.00 53.92
ATOM   19842  N    TYR   2956      46.934  34.560   8.249  1.00 54.97
ATOM   19843  CA   TYR   2956      46.271  34.070   9.451  1.00 55.91
ATOM   19844  CB   TYR   2956      44.756  34.258   9.346  1.00 56.40
ATOM   19845  CG   TYR   2956      44.014  33.837  10.595  1.00 57.63
ATOM   19846  CD1  TYR   2956      44.082  34.600  11.761  1.00 57.68
ATOM   19847  CE1  TYR   2956      43.423  34.202  12.923  1.00 58.33
ATOM   19848  CD2  TYR   2956      43.265  32.660  10.621  1.00 58.32
ATOM   19849  CE2  TYR   2956      42.603  32.251  11.778  1.00 58.41
ATOM   19850  CZ   TYR   2956      42.686  33.027  12.924  1.00 58.65
ATOM   19851  OH   TYR   2956      42.033  32.631  14.069  1.00 58.77
ATOM   19852  C    TYR   2956      46.577  32.591   9.675  1.00 56.09
ATOM   19853  O    TYR   2956      46.478  31.779   8.754  1.00 56.17
ATOM   19854  N    PRO   2957      46.962  32.223  10.908  1.00 56.16
ATOM   19855  CD   PRO   2957      47.177  30.824  11.320  1.00 56.15
ATOM   19856  CA   PRO   2957      47.109  33.126  12.052  1.00 56.59
ATOM   19857  CB   PRO   2957      47.081  32.173  13.239  1.00 56.39
ATOM   19858  CG   PRO   2957      47.791  30.980  12.698  1.00 56.47
ATOM   19859  C    PRO   2957      48.405  33.928  11.984  1.00 57.30
ATOM   19860  O    PRO   2957      49.413  33.452  11.462  1.00 57.47
ATOM   19861  N    GLY   2958      48.370  35.148  12.512  1.00 58.29
ATOM   19862  CA   GLY   2958      49.551  35.991  12.504  1.00 59.19
ATOM   19863  C    GLY   2958      50.469  35.674  13.668  1.00 59.90
ATOM   19864  O    GLY   2958      50.359  34.612  14.282  1.00 59.93
ATOM   19865  N    GLU   2959      51.376  36.595  13.975  1.00 60.38
ATOM   19866  CA   GLU   2959      52.312  36.400  15.076  1.00 60.87
ATOM   19867  CB   GLU   2959      53.457  37.413  14.988  1.00 61.40
ATOM   19868  CG   GLU   2959      54.521  37.227  16.060  1.00 61.82
ATOM   19869  CD   GLU   2959      55.285  35.926  15.903  1.00 62.12
ATOM   19870  OE1  GLU   2959      56.067  35.579  16.813  1.00 62.78
ATOM   19871  OE2  GLU   2959      55.108  35.251  14.867  1.00 62.30
ATOM   19872  C    GLU   2959      51.605  36.548  16.419  1.00 60.84
ATOM   19873  O    GLU   2959      51.933  35.855  17.384  1.00 60.59
ATOM   19874  N    GLU   2960      50.634  37.454  16.477  1.00 61.19
ATOM   19875  CA   GLU   2960      49.889  37.689  17.709  1.00 61.99
ATOM   19876  CB   GLU   2960      48.941  38.882  17.554  1.00 62.57
ATOM   19877  CG   GLU   2960      49.390  39.924  16.546  1.00 63.87
ATOM   19878  CD   GLU   2960      49.017  39.551  15.123  1.00 64.41
ATOM   19879  OE1  GLU   2960      47.804  39.475  14.828  1.00 64.20
ATOM   19880  OE2  GLU   2960      49.933  39.330  14.301  1.00 64.88
ATOM   19881  C    GLU   2960      49.077  36.450  18.052  1.00 61.91
ATOM   19882  O    GLU   2960      48.947  36.081  19.219  1.00 62.32
ATOM   19883  N    HIS   2961      48.534  35.813  17.020  1.00 61.34
ATOM   19884  CA   HIS   2961      47.723  34.615  17.196  1.00 60.73
ATOM   19885  CB   HIS   2961      46.855  34.386  15.957  1.00 59.89
ATOM   19886  CG   HIS   2961      46.116  35.607  15.504  1.00 58.97
ATOM   19887  CD2  HIS   2961      46.080  36.231  14.302  1.00 58.22
ATOM   19888  ND1  HIS   2961      45.285  36.326  16.334  1.00 58.84
ATOM   19889  CE1  HIS   2961      44.768  37.341  15.665  1.00 58.19
ATOM   19890  NE2  HIS   2961      45.233  37.306  14.430  1.00 57.99
ATOM   19891  C    HIS   2961      48.599  33.391  17.437  1.00 60.75
ATOM   19892  O    HIS   2961      48.106  32.261  17.467  1.00 60.65
ATOM   19893  N    SER   2962      49.897  33.619  17.614  1.00 60.45
ATOM   19894  CA   SER   2962      50.839  32.529  17.844  1.00 60.48
```

```
ATOM   19895  CB   SER  2962      52.007  32.630  16.862  1.00 60.35
ATOM   19896  OG   SER  2962      51.552  32.553  15.522  1.00 59.02
ATOM   19897  C    SER  2962      51.370  32.518  19.273  1.00 60.73
ATOM   19898  O    SER  2962      51.339  33.534  19.964  1.00 60.10
ATOM   19899  N    PHE  2963      51.851  31.356  19.708  1.00 61.57
ATOM   19900  CA   PHE  2963      52.394  31.194  21.053  1.00 62.25
ATOM   19901  CB   PHE  2963      51.644  30.091  21.807  1.00 63.03
ATOM   19902  CG   PHE  2963      50.248  30.470  22.214  1.00 64.44
ATOM   19903  CD1  PHE  2963      49.278  30.750  21.256  1.00 64.83
ATOM   19904  CD2  PHE  2963      49.903  30.552  23.560  1.00 64.71
ATOM   19905  CE1  PHE  2963      47.983  31.107  21.632  1.00 64.99
ATOM   19906  CE2  PHE  2963      48.614  30.906  23.948  1.00 65.11
ATOM   19907  CZ   PHE  2963      47.651  31.185  22.981  1.00 65.30
ATOM   19908  C    PHE  2963      53.880  30.853  21.006  1.00 62.31
ATOM   19909  O    PHE  2963      54.379  30.323  20.011  1.00 61.84
ATOM   19910  N    HIS  2964      54.577  31.156  22.096  1.00 62.35
ATOM   19911  CA   HIS  2964      56.007  30.897  22.201  1.00 62.42
ATOM   19912  CB   HIS  2964      56.795  32.135  21.772  1.00 62.17
ATOM   19913  CG   HIS  2964      56.654  32.468  20.318  1.00 62.21
ATOM   19914  CD2  HIS  2964      56.082  33.526  19.696  1.00 62.06
ATOM   19915  ND1  HIS  2964      57.137  31.652  19.319  1.00 62.16
ATOM   19916  CE1  HIS  2964      56.870  32.193  18.143  1.00 62.55
ATOM   19917  NE2  HIS  2964      56.230  33.330  18.344  1.00 62.23
ATOM   19918  C    HIS  2964      56.382  30.514  23.628  1.00 62.87
ATOM   19919  O    HIS  2964      57.101  29.507  23.800  1.00 63.17
ATOM   19920  OXT  HIS  2964      55.958  31.232  24.558  1.00 63.88
ATOM   19921  C1   KPL  2965      38.359  24.260  19.395  1.00 44.32
ATOM   19922  C2   KPL  2965      38.509  22.957  18.586  1.00 44.37
ATOM   19923  C3   KPL  2965      38.070  23.219  17.138  1.00 44.11
ATOM   19924  C4   KPL  2965      39.994  22.528  18.576  1.00 44.41
ATOM   19925  O1   KPL  2965      40.466  22.273  19.906  1.00 46.59
ATOM   19926  C5   KPL  2965      37.616  21.846  19.201  1.00 44.46
ATOM   19927  O2   KPL  2965      38.120  20.811  19.596  1.00 45.29
ATOM   19928  C6   KPL  2965      36.112  22.005  19.331  1.00 44.39
ATOM   19929  O3   KPL  2965      35.550  23.016  18.951  1.00 44.59
ATOM   19930  O4   KPL  2965      35.382  21.012  19.874  1.00 43.64
ATOM   19931 MG+2  MG2  3001       3.994  24.216  47.085  1.00 41.37
ATOM   19932 MG+2  MG2  3002       6.567  28.508  15.105  1.00 41.66
ATOM   19933 MG+2  MG2  3003      -3.352   1.040   0.322  1.00 26.64
ATOM   19934 MG+2  MG2  3004     -12.375 -19.811  23.437  1.00 24.57
ATOM   19935 MG+2  MG2  3005      -7.605  -5.894  52.220  1.00 34.50
ATOM   19936 MG+2  MG2  3006      27.460  -4.705   0.894  1.00 30.26
ATOM   19937 MG+2  MG2  3007      17.331 -30.253  18.884  1.00 32.29
ATOM   19938 MG+2  MG2  3008      19.663 -21.554  49.976  1.00 25.48
ATOM   19939 MG+2  MG2  3009      31.302   8.730  51.343  1.00 41.34
ATOM   19940 MG+2  MG2  3010      36.277  19.579  21.091  1.00 52.60
ATOM   19941  OH2  WAT  3011      31.424 -16.107  39.470  1.00 10.76
ATOM   19942  OH2  WAT  3012      12.698 -18.611  32.844  1.00 10.49
ATOM   19943  OH2  WAT  3013      -8.246   1.949  11.544  1.00 13.19
ATOM   19944  OH2  WAT  3014      27.207 -31.545  22.513  1.00 13.62
ATOM   19945  OH2  WAT  3015      25.517 -21.182  20.257  1.00 10.14
ATOM   19946  OH2  WAT  3016      -7.674  17.525  37.246  1.00 13.74
ATOM   19947  OH2  WAT  3017      -2.159  -6.488  21.338  1.00 15.76
ATOM   19948  OH2  WAT  3018       0.835  -9.327  15.447  1.00 11.52
ATOM   19949  OH2  WAT  3019       3.764 -32.000  22.104  1.00 11.84
ATOM   19950  OH2  WAT  3020      37.123  -1.512  39.521  1.00 16.58
ATOM   19951  OH2  WAT  3021      17.933 -46.120  14.538  1.00 11.66
ATOM   19952  OH2  WAT  3022      10.775 -17.843  17.172  1.00 15.20
ATOM   19953  OH2  WAT  3023      15.784 -11.897  13.470  1.00 11.48
ATOM   19954  OH2  WAT  3024     -14.336  22.570 -15.394  1.00 13.53
ATOM   19955  OH2  WAT  3025      12.577  -9.564   9.580  1.00 14.31
ATOM   19956  OH2  WAT  3026     -23.367  12.451   2.123  1.00 20.69
ATOM   19957  OH2  WAT  3027       0.767 -19.320  30.486  1.00 16.05
ATOM   19958  OH2  WAT  3028      -0.982  -8.203  33.657  1.00 15.14
ATOM   19959  OH2  WAT  3029       5.689   5.614  45.308  1.00 11.24
ATOM   19960  OH2  WAT  3030       4.143   4.088  43.662  1.00 15.33
ATOM   19961  OH2  WAT  3031     -16.843  -2.595  47.938  1.00 11.00
ATOM   19962  OH2  WAT  3032      12.241  13.450  38.158  1.00 23.70
ATOM   19963  OH2  WAT  3033      -5.960 -12.449  28.625  1.00 14.48
ATOM   19964  OH2  WAT  3034      16.382 -12.732  16.031  1.00 14.41
ATOM   19965  OH2  WAT  3035      33.192 -17.361  37.635  1.00 14.11
ATOM   19966  OH2  WAT  3036      29.576  -3.425  53.736  1.00 16.58
ATOM   19967  OH2  WAT  3037      25.016 -14.473  37.183  1.00 18.91
ATOM   19968  OH2  WAT  3038      10.453   7.434  47.450  1.00 13.74
ATOM   19969  OH2  WAT  3039       0.953 -32.769   9.383  1.00 15.20
ATOM   19970  OH2  WAT  3040      -7.328   8.718 -18.137  1.00 18.80
ATOM   19971  OH2  WAT  3041      -8.835   2.730  43.501  1.00 10.87
```

```
ATOM   19972   OH2 WAT   3042     -1.580 -10.794   33.592   1.00 12.62
ATOM   19973   OH2 WAT   3043    -12.914  -8.541   27.617   1.00 12.73
ATOM   19974   OH2 WAT   3044     21.710  13.409   25.403   1.00 31.57
ATOM   19975   OH2 WAT   3045      7.683 -20.302   30.445   1.00 10.85
ATOM   19976   OH2 WAT   3046      1.102 -30.671   18.260   1.00 15.68
ATOM   19977   OH2 WAT   3047     28.173   7.798   31.821   1.00 20.07
ATOM   19978   OH2 WAT   3048     -1.179 -14.949   31.883   1.00 13.42
ATOM   19979   OH2 WAT   3049     13.221  14.116   19.297   1.00 20.69
ATOM   19980   OH2 WAT   3050     -2.044  20.189   37.466   1.00 16.68
ATOM   19981   OH2 WAT   3051     17.876 -14.432   39.307   1.00 16.30
ATOM   19982   OH2 WAT   3052     -0.744 -30.549   20.671   1.00 17.77
ATOM   19983   OH2 WAT   3053     35.481 -39.258   29.142   1.00 12.21
ATOM   19984   OH2 WAT   3054     -9.507   4.070  -12.790   1.00 16.79
ATOM   19985   OH2 WAT   3055     31.604  -1.451   46.191   1.00 14.27
ATOM   19986   OH2 WAT   3056    -14.406   5.407   38.561   1.00 16.53
ATOM   19987   OH2 WAT   3057     -0.928 -11.952   36.038   1.00 12.23
ATOM   19988   OH2 WAT   3058      0.468 -17.148   54.501   1.00 17.45
ATOM   19989   OH2 WAT   3059      5.125 -36.602   35.570   1.00 20.20
ATOM   19990   OH2 WAT   3060      0.620 -51.357   23.066   1.00 14.88
ATOM   19991   OH2 WAT   3061     17.818 -20.565   43.493   1.00 14.36
ATOM   19992   OH2 WAT   3062     23.320   7.615   14.657   1.00 12.79
ATOM   19993   OH2 WAT   3063    -13.311   2.901   39.033   1.00 16.11
ATOM   19994   OH2 WAT   3064     32.528 -20.167   23.589   1.00 13.88
ATOM   19995   OH2 WAT   3065     13.191  -4.951   48.336   1.00 19.12
ATOM   19996   OH2 WAT   3066    -11.736   7.247    3.147   1.00 13.94
ATOM   19997   OH2 WAT   3067     32.586  -0.717   43.888   1.00 14.86
ATOM   19998   OH2 WAT   3068     11.327  19.214   30.461   1.00 15.85
ATOM   19999   OH2 WAT   3069     19.105 -45.037   17.671   1.00 11.69
ATOM   20000   OH2 WAT   3070     -9.957  -7.454    6.721   1.00 17.25
ATOM   20001   OH2 WAT   3071      9.085 -16.151   57.247   1.00 14.59
ATOM   20002   OH2 WAT   3072     39.426   3.322   24.588   1.00 19.14
ATOM   20003   OH2 WAT   3073      3.530   9.016   39.444   1.00 15.75
ATOM   20004   OH2 WAT   3074    -10.708  15.943  -14.582   1.00 14.94
ATOM   20005   OH2 WAT   3075     -0.027 -17.054   29.261   1.00 12.27
ATOM   20006   OH2 WAT   3076     14.927  -5.859   -4.822   1.00 16.81
ATOM   20007   OH2 WAT   3077     -6.247  19.997   21.778   1.00 16.82
ATOM   20008   OH2 WAT   3078     23.194  -3.748   41.708   1.00 13.63
ATOM   20009   OH2 WAT   3079      3.044 -14.551   15.690   1.00 11.83
ATOM   20010   OH2 WAT   3080     15.856 -44.437   15.495   1.00 16.34
ATOM   20011   OH2 WAT   3081      2.658  -6.744   11.642   1.00 13.95
ATOM   20012   OH2 WAT   3082     18.097  -3.425   45.902   1.00 14.60
ATOM   20013   OH2 WAT   3083     17.808 -10.614   17.279   1.00 20.73
ATOM   20014   OH2 WAT   3084     17.717 -23.621   16.919   1.00 14.50
ATOM   20015   OH2 WAT   3085     20.450 -28.027   39.405   1.00 20.21
ATOM   20016   OH2 WAT   3086    -16.370   8.639   40.975   1.00 19.28
ATOM   20017   OH2 WAT   3087     25.222  -0.313   11.241   1.00 15.89
ATOM   20018   OH2 WAT   3088     11.033  -3.025   -5.467   1.00 16.78
ATOM   20019   OH2 WAT   3089     -2.490  -3.684   17.486   1.00 14.21
ATOM   20020   OH2 WAT   3090     22.173 -49.823   28.580   1.00 17.88
ATOM   20021   OH2 WAT   3091     -8.999 -16.320   27.976   1.00 15.29
ATOM   20022   OH2 WAT   3092    -19.387  -2.818   23.319   1.00 14.53
ATOM   20023   OH2 WAT   3093     35.100  -8.958   15.354   1.00 16.00
ATOM   20024   OH2 WAT   3094    -10.894   6.982   14.192   1.00 14.83
ATOM   20025   OH2 WAT   3095     38.364 -11.130   14.395   1.00 14.78
ATOM   20026   OH2 WAT   3096    -14.355   9.093   12.720   1.00 16.02
ATOM   20027   OH2 WAT   3097     -2.640  -2.142    6.218   1.00 14.25
ATOM   20028   OH2 WAT   3098     14.236 -16.887   34.025   1.00 14.37
ATOM   20029   OH2 WAT   3099     -6.286 -20.729   35.017   1.00 17.92
ATOM   20030   OH2 WAT   3100      5.618 -54.564   19.599   1.00 18.87
ATOM   20031   OH2 WAT   3101     24.798  12.998   34.734   1.00 20.61
ATOM   20032   OH2 WAT   3102     18.157 -48.389   22.944   1.00 18.26
ATOM   20033   OH2 WAT   3103      3.448 -22.348   28.656   1.00 16.83
ATOM   20034   OH2 WAT   3104     37.310  16.574   60.707   1.00 13.63
ATOM   20035   OH2 WAT   3105      7.399  10.930   14.456   1.00 15.32
ATOM   20036   OH2 WAT   3106     -4.065  -6.934   32.716   1.00 13.85
ATOM   20037   OH2 WAT   3107     26.681  -0.650    6.361   1.00 16.84
ATOM   20038   OH2 WAT   3108      2.621 -29.273   20.371   1.00 18.02
ATOM   20039   OH2 WAT   3109     -8.257   9.695  -15.506   1.00 17.18
ATOM   20040   OH2 WAT   3110     -5.408   3.177  -13.054   1.00 16.87
ATOM   20041   OH2 WAT   3111    -14.226 -15.880   35.035   1.00 19.49
ATOM   20042   OH2 WAT   3112      8.844 -18.039   14.940   1.00 13.32
ATOM   20043   OH2 WAT   3113     10.416 -45.629    8.580   1.00 19.28
ATOM   20044   OH2 WAT   3114     24.321 -21.344   39.443   1.00 14.51
ATOM   20045   OH2 WAT   3115     32.620  -1.644   10.966   1.00 18.64
ATOM   20046   OH2 WAT   3116     21.077  -7.973   16.352   1.00 16.09
ATOM   20047   OH2 WAT   3117     11.416   8.982   43.352   1.00 19.27
ATOM   20048   OH2 WAT   3118     35.781 -10.327    4.606   1.00 17.92
```

```
ATOM  20049  OH2 WAT  3119    11.474    7.062    8.572  1.00 18.56
ATOM  20050  OH2 WAT  3120    17.899  -18.896   18.746  1.00 14.76
ATOM  20051  OH2 WAT  3121     9.407    1.445   -5.210  1.00 17.30
ATOM  20052  OH2 WAT  3122    11.378  -25.783   40.687  1.00 19.55
ATOM  20053  OH2 WAT  3123    30.129  -21.017   24.522  1.00 15.05
ATOM  20054  OH2 WAT  3124    15.046  -43.858   18.014  1.00 11.77
ATOM  20055  OH2 WAT  3125    -9.121    2.705   47.977  1.00 17.81
ATOM  20056  OH2 WAT  3126    34.332  -14.474   60.657  1.00 24.94
ATOM  20057  OH2 WAT  3127    -3.766    0.667   55.823  1.00 21.51
ATOM  20058  OH2 WAT  3128    33.157  -10.971   35.543  1.00 17.96
ATOM  20059  OH2 WAT  3129    20.042  -48.084   29.393  1.00 17.39
ATOM  20060  OH2 WAT  3130     7.739  -10.910   -9.034  1.00 16.41
ATOM  20061  OH2 WAT  3131    -2.901  -28.128   17.100  1.00 11.64
ATOM  20062  OH2 WAT  3132     8.775  -17.442   26.955  1.00 15.53
ATOM  20063  OH2 WAT  3133    10.635  -14.815    5.424  1.00 17.26
ATOM  20064  OH2 WAT  3134    -1.407   15.539   35.202  1.00 21.03
ATOM  20065  OH2 WAT  3135    22.262   -3.590   54.476  1.00 17.12
ATOM  20066  OH2 WAT  3136   -13.401  -21.508   25.158  1.00 27.63
ATOM  20067  OH2 WAT  3137     5.128   -2.847   47.443  1.00 12.45
ATOM  20068  OH2 WAT  3138   -15.619   -3.485   24.661  1.00  9.97
ATOM  20069  OH2 WAT  3139    -2.531  -40.976   12.328  1.00 13.52
ATOM  20070  OH2 WAT  3140    -1.909   -4.892   36.246  1.00 16.91
ATOM  20071  OH2 WAT  3141   -19.604   14.972    6.233  1.00 20.13
ATOM  20072  OH2 WAT  3142    -6.017  -42.085   21.509  1.00 16.39
ATOM  20073  OH2 WAT  3143    -7.945   16.282  -13.491  1.00 17.83
ATOM  20074  OH2 WAT  3144    30.702   28.827   44.434  1.00 22.57
ATOM  20075  OH2 WAT  3145    -9.294   18.400   35.274  1.00 15.61
ATOM  20076  OH2 WAT  3146    30.373  -21.453   48.978  1.00 13.66
ATOM  20077  OH2 WAT  3147   -11.335   18.904   38.629  1.00 18.20
ATOM  20078  OH2 WAT  3148     5.189   16.665   30.863  1.00 16.04
ATOM  20079  OH2 WAT  3149     8.219  -17.924   40.764  1.00 16.89
ATOM  20080  OH2 WAT  3150    41.387   -1.649   40.145  1.00 18.07
ATOM  20081  OH2 WAT  3151    -3.245  -39.921    9.833  1.00 18.23
ATOM  20082  OH2 WAT  3152     8.198    9.770   11.939  1.00 15.65
ATOM  20083  OH2 WAT  3153   -13.314    6.554   15.618  1.00 21.95
ATOM  20084  OH2 WAT  3154    11.910  -17.540   37.668  1.00 13.80
ATOM  20085  OH2 WAT  3155   -20.114  -12.582   21.243  1.00 16.42
ATOM  20086  OH2 WAT  3156    -1.281  -11.060    5.278  1.00 17.26
ATOM  20087  OH2 WAT  3157   -17.431    3.089   39.729  1.00 12.26
ATOM  20088  OH2 WAT  3158    -3.548  -35.710   27.746  1.00 16.68
ATOM  20089  OH2 WAT  3159   -17.120    5.018   37.848  1.00 16.94
ATOM  20090  OH2 WAT  3160    13.477   -2.627   54.843  1.00 18.64
ATOM  20091  OH2 WAT  3161    -5.243  -43.014   23.849  1.00 19.60
ATOM  20092  OH2 WAT  3162   -13.199  -10.151   29.903  1.00 15.06
ATOM  20093  OH2 WAT  3163     2.054  -26.977   54.316  1.00 21.37
ATOM  20094  OH2 WAT  3164    23.993  -29.599   61.802  1.00 20.85
ATOM  20095  OH2 WAT  3165    24.933    1.982   44.938  1.00 17.95
ATOM  20096  OH2 WAT  3166    16.321  -50.335   21.944  1.00 14.95
ATOM  20097  OH2 WAT  3167     4.185  -10.137   40.452  1.00 18.49
ATOM  20098  OH2 WAT  3168    -6.542    2.530   38.971  1.00 18.82
ATOM  20099  OH2 WAT  3169    13.980   -5.493   11.385  1.00 15.38
ATOM  20100  OH2 WAT  3170    23.236    4.920   15.059  1.00 16.06
ATOM  20101  OH2 WAT  3171   -18.040   24.374   52.309  1.00 20.78
ATOM  20102  OH2 WAT  3172    37.479   14.626   63.159  1.00 18.93
ATOM  20103  OH2 WAT  3173    40.548    4.987   47.799  1.00 20.00
ATOM  20104  OH2 WAT  3174    -7.860    3.921   45.943  1.00 16.64
ATOM  20105  OH2 WAT  3175     4.737  -16.653   43.656  1.00 23.24
ATOM  20106  OH2 WAT  3176    19.671   -2.177   44.183  1.00 15.91
ATOM  20107  OH2 WAT  3177     9.864   -0.921    9.302  1.00 19.67
ATOM  20108  OH2 WAT  3178    25.798  -18.855   39.813  1.00 15.04
ATOM  20109  OH2 WAT  3179    -3.409   -1.361   49.300  1.00 15.09
ATOM  20110  OH2 WAT  3180     5.816   22.238   40.960  1.00 19.83
ATOM  20111  OH2 WAT  3181    21.304   15.686   38.364  1.00 19.23
ATOM  20112  OH2 WAT  3182    33.264  -12.303   53.961  1.00 22.43
ATOM  20113  OH2 WAT  3183   -19.721  -30.018   18.220  1.00 17.02
ATOM  20114  OH2 WAT  3184    30.616   19.768   70.046  1.00 18.96
ATOM  20115  OH2 WAT  3185    13.397   11.894    3.881  1.00 22.84
ATOM  20116  OH2 WAT  3186    21.307    4.413   11.054  1.00 18.87
ATOM  20117  OH2 WAT  3187   -14.018   16.237  -13.520  1.00 13.75
ATOM  20118  OH2 WAT  3188    27.233    3.845   48.990  1.00 15.76
ATOM  20119  OH2 WAT  3189    18.322  -35.199   37.473  1.00 21.41
ATOM  20120  OH2 WAT  3190     3.346   10.973   16.658  1.00 17.09
ATOM  20121  OH2 WAT  3191    -1.268    0.118   45.115  1.00 20.12
ATOM  20122  OH2 WAT  3192     8.866  -56.007   22.359  1.00 22.50
ATOM  20123  OH2 WAT  3193     4.755   11.704  -21.103  1.00 21.21
ATOM  20124  OH2 WAT  3194    29.496    7.747    5.130  1.00 24.25
ATOM  20125  OH2 WAT  3195     6.916   -2.587   12.344  1.00 16.98
```

```
ATOM   20126   OH2 WAT   3196      6.422   15.829   26.439   1.00 19.29
ATOM   20127   OH2 WAT   3197    -13.894  -11.050   64.371   1.00 18.77
ATOM   20128   OH2 WAT   3198      3.453  -13.631   20.195   1.00 16.50
ATOM   20129   OH2 WAT   3199     13.511  -27.216   36.881   1.00 18.17
ATOM   20130   OH2 WAT   3200     10.479  -16.462   40.801   1.00 14.13
ATOM   20131   OH2 WAT   3201     19.084    1.615   46.456   1.00 19.77
ATOM   20132   OH2 WAT   3202     13.651  -21.751    8.937   1.00 19.12
ATOM   20133   OH2 WAT   3203     30.258   -1.193   39.421   1.00 23.25
ATOM   20134   OH2 WAT   3204     22.221  -46.203   12.674   1.00 18.08
ATOM   20135   OH2 WAT   3205    -10.806   20.587   22.314   1.00 22.59
ATOM   20136   OH2 WAT   3206     25.446    8.006    4.362   1.00 22.71
ATOM   20137   OH2 WAT   3207     -1.437  -43.569   11.596   1.00 14.68
ATOM   20138   OH2 WAT   3208      6.165   17.099   16.294   1.00 19.35
ATOM   20139   OH2 WAT   3209      0.456   -5.728   18.027   1.00 16.11
ATOM   20140   OH2 WAT   3210     17.554  -15.937   28.233   1.00 15.55
ATOM   20141   OH2 WAT   3211      2.388  -14.201   39.957   1.00 16.30
ATOM   20142   OH2 WAT   3212     -8.445  -43.392   21.151   1.00 15.83
ATOM   20143   OH2 WAT   3213     -1.149   -2.138   11.071   1.00 16.20
ATOM   20144   OH2 WAT   3214     16.006  -18.966    9.491   1.00 22.11
ATOM   20145   OH2 WAT   3215     40.917   14.465   61.223   1.00 17.97
ATOM   20146   OH2 WAT   3216     20.418   -7.448   40.411   1.00 18.22
ATOM   20147   OH2 WAT   3217      7.210    6.558  -23.993   1.00 22.59
ATOM   20148   OH2 WAT   3218     13.270   -1.290   -5.622   1.00 17.55
ATOM   20149   OH2 WAT   3219     16.193   -6.804   65.086   1.00 23.17
ATOM   20150   OH2 WAT   3220      1.345    6.829   53.690   1.00 19.22
ATOM   20151   OH2 WAT   3221    -24.487  -28.861   12.302   1.00 24.58
ATOM   20152   OH2 WAT   3222     -5.861    6.465   53.062   1.00 22.85
ATOM   20153   OH2 WAT   3223      2.196  -17.385    9.566   1.00 14.82
ATOM   20154   OH2 WAT   3224      5.907   18.688   37.560   1.00 23.71
ATOM   20155   OH2 WAT   3225      9.404   -6.985  -17.364   1.00 18.51
ATOM   20156   OH2 WAT   3226    -19.508   18.345   -4.134   1.00 18.87
ATOM   20157   OH2 WAT   3227     43.927   19.766   59.453   1.00 22.41
ATOM   20158   OH2 WAT   3228     10.197    3.381   10.668   1.00 16.51
ATOM   20159   OH2 WAT   3229    -14.378   18.764   53.775   1.00 20.79
ATOM   20160   OH2 WAT   3230    -20.438  -16.179   61.040   1.00 22.89
ATOM   20161   OH2 WAT   3231     30.282  -36.634   32.910   1.00 15.84
ATOM   20162   OH2 WAT   3232     39.788   13.875   64.578   1.00 17.48
ATOM   20163   OH2 WAT   3233    -21.813  -14.345    7.149   1.00 19.96
ATOM   20164   OH2 WAT   3234      3.481  -16.263   23.755   1.00 24.36
ATOM   20165   OH2 WAT   3235     32.740    7.544   50.333   1.00 19.77
ATOM   20166   OH2 WAT   3236    -16.527  -40.590   22.042   1.00 15.97
ATOM   20167   OH2 WAT   3237    -20.321   -1.940   29.261   1.00 17.79
ATOM   20168   OH2 WAT   3238      6.910  -16.348   54.593   1.00 23.74
ATOM   20169   OH2 WAT   3239     32.211   -4.106   12.342   1.00 12.74
ATOM   20170   OH2 WAT   3240      6.833  -38.308   33.861   1.00 27.01
ATOM   20171   OH2 WAT   3241     -5.435    3.091   15.587   1.00 25.68
ATOM   20172   OH2 WAT   3242      5.162   -5.435    9.145   1.00 15.66
ATOM   20173   OH2 WAT   3243    -12.976   18.875    1.055   1.00 26.56
ATOM   20174   OH2 WAT   3244      4.941  -50.548   27.523   1.00 18.25
ATOM   20175   OH2 WAT   3245     23.502    4.496   17.712   1.00 21.76
ATOM   20176   OH2 WAT   3246     29.781   -8.409  -12.106   1.00 22.34
ATOM   20177   OH2 WAT   3247     16.179   20.627   27.934   1.00 17.27
ATOM   20178   OH2 WAT   3248     25.630    6.081   35.873   1.00 24.47
ATOM   20179   OH2 WAT   3249     19.075    2.823    8.867   1.00 17.88
ATOM   20180   OH2 WAT   3250     24.463   -1.978   55.349   1.00 19.50
ATOM   20181   OH2 WAT   3251      6.006   -7.737    8.134   1.00 18.83
ATOM   20182   OH2 WAT   3252     24.297  -22.682   41.765   1.00 22.36
ATOM   20183   OH2 WAT   3253    -14.877    8.810   15.278   1.00 19.04
ATOM   20184   OH2 WAT   3254      6.808   -2.819   49.732   1.00 18.14
ATOM   20185   OH2 WAT   3255     26.166    5.603   20.868   1.00 21.17
ATOM   20186   OH2 WAT   3256      4.305  -15.545   56.992   1.00 16.97
ATOM   20187   OH2 WAT   3257     13.421  -15.839   15.404   1.00 19.34
ATOM   20188   OH2 WAT   3258    -12.696  -19.398   26.900   1.00 26.15
ATOM   20189   OH2 WAT   3259      5.047  -18.352   55.566   1.00 20.95
ATOM   20190   OH2 WAT   3260    -21.140  -30.966   20.114   1.00 22.15
ATOM   20191   OH2 WAT   3261     -0.778   32.093   65.599   1.00 22.89
ATOM   20192   OH2 WAT   3262     -4.568  -12.190    8.019   1.00 19.08
ATOM   20193   OH2 WAT   3263     -9.797    1.121  -14.744   1.00 15.93
ATOM   20194   OH2 WAT   3264     -6.689   23.825   46.121   1.00 15.64
ATOM   20195   OH2 WAT   3265     14.061   12.604   42.176   1.00 31.75
ATOM   20196   OH2 WAT   3266     -0.527   -0.897   42.399   1.00 20.09
ATOM   20197   OH2 WAT   3267     -0.194   33.276   58.037   1.00 23.96
ATOM   20198   OH2 WAT   3268     24.901  -17.073   22.925   1.00 20.92
ATOM   20199   OH2 WAT   3269     41.330   -8.601   15.013   1.00 23.33
ATOM   20200   OH2 WAT   3270      4.620   -8.727   -6.543   1.00 24.77
ATOM   20201   OH2 WAT   3271     35.246  -17.451   41.068   1.00 18.93
ATOM   20202   OH2 WAT   3272     25.285   11.482   32.566   1.00 19.14
```

```
ATOM   20203   OH2 WAT   3273      41.753 -19.624   48.472   1.00 23.10
ATOM   20204   OH2 WAT   3274       4.615   0.859   46.531   1.00 16.54
ATOM   20205   OH2 WAT   3275      31.542 -15.777   28.303   1.00 20.38
ATOM   20206   OH2 WAT   3276      19.527  11.849   39.254   1.00 15.70
ATOM   20207   OH2 WAT   3277      33.147 -23.760   25.248   1.00 16.58
ATOM   20208   OH2 WAT   3278      -5.916 -49.095   13.770   1.00 29.58
ATOM   20209   OH2 WAT   3279      23.794 -15.430   33.966   1.00 21.14
ATOM   20210   OH2 WAT   3280     -14.122   0.241  -14.020   1.00 21.60
ATOM   20211   OH2 WAT   3281     -31.126  -7.465   48.968   1.00 18.37
ATOM   20212   OH2 WAT   3282      33.182   4.867   26.769   1.00 29.67
ATOM   20213   OH2 WAT   3283      24.781   8.897   32.613   1.00 23.60
ATOM   20214   OH2 WAT   3284      37.324 -32.782   27.936   1.00 20.55
ATOM   20215   OH2 WAT   3285      36.703  -2.932   24.810   1.00 20.31
ATOM   20216   OH2 WAT   3286      16.737   6.043  -10.203   1.00 14.77
ATOM   20217   OH2 WAT   3287      42.281  10.193   65.227   1.00 20.86
ATOM   20218   OH2 WAT   3288     -24.643 -24.852    6.883   1.00 22.27
ATOM   20219   OH2 WAT   3289       3.427  33.777   58.006   1.00 17.87
ATOM   20220   OH2 WAT   3290      26.392   2.408   17.399   1.00 19.04
ATOM   20221   OH2 WAT   3291     -18.654  -5.950   66.016   1.00 23.24
ATOM   20222   OH2 WAT   3292     -13.093 -15.210   22.791   1.00 20.23
ATOM   20223   OH2 WAT   3293       9.173  -6.311   51.088   1.00 24.64
ATOM   20224   OH2 WAT   3294      38.564 -37.037   23.715   1.00 17.22
ATOM   20225   OH2 WAT   3295     -23.611 -28.491   18.445   1.00 21.94
ATOM   20226   OH2 WAT   3296      43.474 -20.767    2.623   1.00 21.92
ATOM   20227   OH2 WAT   3297       5.370 -10.917   64.991   1.00 20.49
ATOM   20228   OH2 WAT   3298      21.104  12.701   14.311   1.00 20.74
ATOM   20229   OH2 WAT   3299      -8.121  27.589   65.671   1.00 30.46
ATOM   20230   OH2 WAT   3300      17.972   5.158    7.455   1.00 16.91
ATOM   20231   OH2 WAT   3301      10.494  -0.984   -3.411   1.00 21.18
ATOM   20232   OH2 WAT   3302       4.032  42.243   10.424   1.00 30.91
ATOM   20233   OH2 WAT   3303      24.441 -27.550   68.904   1.00 18.25
ATOM   20234   OH2 WAT   3304       6.219  21.783   14.079   1.00 25.97
ATOM   20235   OH2 WAT   3305      23.593  -1.831   13.125   1.00 19.74
ATOM   20236   OH2 WAT   3306     -17.736   1.565   54.302   1.00 19.29
ATOM   20237   OH2 WAT   3307      13.850  -2.899   -3.293   1.00 22.15
ATOM   20238   OH2 WAT   3308      34.332 -43.289   29.457   1.00 20.15
ATOM   20239   OH2 WAT   3309      -5.197  -6.814    1.773   1.00 19.55
ATOM   20240   OH2 WAT   3310     -12.090  18.072   36.228   1.00 19.58
ATOM   20241   OH2 WAT   3311      17.354  10.254   43.120   1.00 34.77
ATOM   20242   OH2 WAT   3312      -3.313  11.757   19.670   1.00 26.41
ATOM   20243   OH2 WAT   3313       8.528 -13.751   41.287   1.00 21.05
ATOM   20244   OH2 WAT   3314      32.008 -20.113    6.850   1.00 25.55
ATOM   20245   OH2 WAT   3315      13.281  16.160   15.117   1.00 24.88
ATOM   20246   OH2 WAT   3316      28.691   9.379    7.117   1.00 20.59
ATOM   20247   OH2 WAT   3317      23.789  -6.461   61.180   1.00 26.68
ATOM   20248   OH2 WAT   3318       1.515  36.096   58.072   1.00 18.91
ATOM   20249   OH2 WAT   3319      48.872  11.459   42.531   1.00 27.53
ATOM   20250   OH2 WAT   3320       5.225 -25.223   34.596   1.00 14.92
ATOM   20251   OH2 WAT   3321      37.106 -22.432    3.847   1.00 17.63
ATOM   20252   OH2 WAT   3322      -9.345  -4.853   27.183   1.00 24.67
ATOM   20253   OH2 WAT   3323      34.721 -21.213   36.495   1.00 21.39
ATOM   20254   OH2 WAT   3324      32.652 -14.927  -13.607   1.00 25.32
ATOM   20255   OH2 WAT   3325     -13.339  21.021   -8.922   1.00 22.80
ATOM   20256   OH2 WAT   3326      -3.296  -1.036   16.162   1.00 24.45
ATOM   20257   OH2 WAT   3327       9.522 -32.401   16.459   1.00 23.66
ATOM   20258   OH2 WAT   3328      18.151  15.055   63.606   1.00 19.05
ATOM   20259   OH2 WAT   3329       6.249 -47.125   10.644   1.00 21.08
ATOM   20260   OH2 WAT   3330      -9.192  11.917   33.840   1.00 20.79
ATOM   20261   OH2 WAT   3331       4.631 -19.143   15.726   1.00 20.59
ATOM   20262   OH2 WAT   3332      18.911  18.491   41.568   1.00 24.07
ATOM   20263   OH2 WAT   3333     -17.813  22.262   45.797   1.00 26.58
ATOM   20264   OH2 WAT   3334      10.713 -28.271   37.324   1.00 25.49
ATOM   20265   OH2 WAT   3335      29.350  -5.186    2.361   1.00 31.20
ATOM   20266   OH2 WAT   3336       7.196  -5.221   46.352   1.00 22.56
ATOM   20267   OH2 WAT   3337      54.614  10.503   48.370   1.00 21.87
ATOM   20268   OH2 WAT   3338      12.377 -24.993   37.751   1.00 21.71
ATOM   20269   OH2 WAT   3339      16.863   5.321   48.931   1.00 23.14
ATOM   20270   OH2 WAT   3340      -8.724  19.145   20.888   1.00 19.11
ATOM   20271   OH2 WAT   3341      13.381 -19.714   -4.203   1.00 16.96
ATOM   20272   OH2 WAT   3342      11.141  15.500   -6.398   1.00 25.52
ATOM   20273   OH2 WAT   3343      -0.771  12.885   18.816   1.00 31.48
ATOM   20274   OH2 WAT   3344     -16.965   4.474   14.900   1.00 22.48
ATOM   20275   OH2 WAT   3345      19.464  21.926   68.546   1.00 24.61
ATOM   20276   OH2 WAT   3346      -8.665  -0.567   10.532   1.00 17.50
ATOM   20277   OH2 WAT   3347      19.548  -3.441   41.810   1.00 18.14
ATOM   20278   OH2 WAT   3348       3.984   5.093   41.179   1.00 19.65
ATOM   20279   OH2 WAT   3349      34.101   4.713    6.355   1.00 26.04
```

```
ATOM   20280   OH2 WAT   3350      9.510 -54.905   26.309   1.00 22.92
ATOM   20281   OH2 WAT   3351      2.738   2.375   54.788   1.00 21.38
ATOM   20282   OH2 WAT   3352     38.200  -3.877   39.235   1.00 17.67
ATOM   20283   OH2 WAT   3353     10.728  14.126   13.818   1.00 21.22
ATOM   20284   OH2 WAT   3354     -1.810  -3.501  -10.761   1.00 32.21
ATOM   20285   OH2 WAT   3355     23.131  20.084   52.484   1.00 21.25
ATOM   20286   OH2 WAT   3356     13.275  37.450   61.583   1.00 23.72
ATOM   20287   OH2 WAT   3357     14.902 -27.854   39.228   1.00 17.88
ATOM   20288   OH2 WAT   3358     17.196   0.708  -19.731   1.00 22.56
ATOM   20289   OH2 WAT   3359     12.894  27.941   72.812   1.00 22.10
ATOM   20290   OH2 WAT   3360     51.803  18.337   55.429   1.00 23.28
ATOM   20291   OH2 WAT   3361     23.951  22.297   38.321   1.00 19.39
ATOM   20292   OH2 WAT   3362     28.231  10.502   25.782   1.00 29.33
ATOM   20293   OH2 WAT   3363    -19.632 -10.100   40.923   1.00 24.00
ATOM   20294   OH2 WAT   3364      0.381 -18.881   70.964   1.00 24.24
ATOM   20295   OH2 WAT   3365     41.050  -6.012   15.791   1.00 25.68
ATOM   20296   OH2 WAT   3366     25.036 -21.624   17.420   1.00 19.61
ATOM   20297   OH2 WAT   3367     20.757 -12.469   18.162   1.00 19.66
ATOM   20298   OH2 WAT   3368     25.031 -39.595   34.156   1.00 17.92
ATOM   20299   OH2 WAT   3369    -29.570  -5.102   46.308   1.00 22.63
ATOM   20300   OH2 WAT   3370     -4.963  11.491   58.938   1.00 26.60
ATOM   20301   OH2 WAT   3371     -1.293  15.137  -16.952   1.00 22.14
ATOM   20302   OH2 WAT   3372      7.371  10.814   64.052   1.00 22.29
ATOM   20303   OH2 WAT   3373     16.271 -27.044   44.698   1.00 21.59
ATOM   20304   OH2 WAT   3374     -9.825 -19.028   36.378   1.00 15.87
ATOM   20305   OH2 WAT   3375    -24.137  -9.482   10.270   1.00 23.02
ATOM   20306   OH2 WAT   3376    -13.705 -13.121   62.268   1.00 20.24
ATOM   20307   OH2 WAT   3377    -11.384   0.851    7.106   1.00 24.50
ATOM   20308   OH2 WAT   3378     41.978 -12.471   14.199   1.00 23.08
ATOM   20309   OH2 WAT   3379     -3.147 -14.517    6.808   1.00 23.32
ATOM   20310   OH2 WAT   3380     -0.728 -27.767   19.798   1.00 21.29
ATOM   20311   OH2 WAT   3381     -0.354  -4.894  -20.116   1.00 24.42
ATOM   20312   OH2 WAT   3382    -21.061 -11.267   68.198   1.00 30.13
ATOM   20313   OH2 WAT   3383    -14.706 -12.293   29.188   1.00 20.50
ATOM   20314   OH2 WAT   3384     43.391   2.510   23.335   1.00 25.76
ATOM   20315   OH2 WAT   3385      3.515  39.540   67.856   1.00 26.52
ATOM   20316   OH2 WAT   3386     -1.928   8.812  -25.826   1.00 33.73
ATOM   20317   OH2 WAT   3387     50.385   2.215   42.463   1.00 29.09
ATOM   20318   OH2 WAT   3388     17.087  16.878   20.716   1.00 37.71
ATOM   20319   OH2 WAT   3389      8.298  15.973    7.123   1.00 32.77
ATOM   20320   OH2 WAT   3390     34.661 -21.425   25.109   1.00 19.60
ATOM   20321   OH2 WAT   3391     19.966 -51.330   15.176   1.00 26.16
ATOM   20322   OH2 WAT   3392     -9.059  -4.483   51.040   1.00 20.52
ATOM   20323   OH2 WAT   3393     25.707 -32.629   33.317   1.00 17.81
ATOM   20324   OH2 WAT   3394      5.534  19.085    5.472   1.00 33.14
ATOM   20325   OH2 WAT   3395     14.622  19.551   55.214   1.00 19.96
ATOM   20326   OH2 WAT   3396     24.959 -14.087   20.835   1.00 28.72
ATOM   20327   OH2 WAT   3397     13.290  17.903   38.782   1.00 20.42
ATOM   20328   OH2 WAT   3398     -5.862  -4.263   56.954   1.00 32.48
ATOM   20329   OH2 WAT   3399      6.562  15.994   19.058   1.00 25.19
ATOM   20330   OH2 WAT   3400     14.970   3.846  -18.083   1.00 19.32
ATOM   20331   OH2 WAT   3401     -7.124  15.004  -19.783   1.00 24.92
ATOM   20332   OH2 WAT   3402     34.119  -8.981  -11.775   1.00 21.64
ATOM   20333   OH2 WAT   3403      5.848  15.691   37.447   1.00 21.96
ATOM   20334   OH2 WAT   3404     -4.384   5.307   38.927   1.00 28.93
ATOM   20335   OH2 WAT   3405     -8.462  19.489   -3.041   1.00 23.36
ATOM   20336   OH2 WAT   3406     21.504 -14.699   19.950   1.00 29.34
ATOM   20337   OH2 WAT   3407    -21.088   4.227   39.634   1.00 22.61
ATOM   20338   OH2 WAT   3408     -5.619 -10.651    5.927   1.00 24.23
ATOM   20339   OH2 WAT   3409     52.693   1.167   48.206   1.00 21.20
ATOM   20340   OH2 WAT   3410    -16.221  -9.667   65.559   1.00 20.52
ATOM   20341   OH2 WAT   3411    -25.467  -9.423   43.328   1.00 24.48
ATOM   20342   OH2 WAT   3412    -20.988   4.741   56.477   1.00 26.96
ATOM   20343   OH2 WAT   3413     19.198  18.956   55.185   1.00 23.07
ATOM   20344   OH2 WAT   3414    -24.253 -31.934   12.026   1.00 26.24
ATOM   20345   OH2 WAT   3415     12.072  18.774   35.664   1.00 23.52
ATOM   20346   OH2 WAT   3416    -12.454   3.743   32.390   1.00 17.67
ATOM   20347   OH2 WAT   3417    -18.447   6.868   40.520   1.00 24.96
ATOM   20348   OH2 WAT   3418      6.103  -8.025   44.128   1.00 27.53
ATOM   20349   OH2 WAT   3419    -15.120 -36.912    4.961   1.00 24.66
ATOM   20350   OH2 WAT   3420     18.742   5.029   46.950   1.00 28.56
ATOM   20351   OH2 WAT   3421     14.049 -14.727   75.131   1.00 22.18
ATOM   20352   OH2 WAT   3422     25.532 -35.284   59.886   1.00 25.87
ATOM   20353   OH2 WAT   3423     14.242   4.864    4.801   1.00 26.11
ATOM   20354   OH2 WAT   3424      2.505  -8.983   62.076   1.00 23.05
ATOM   20355   OH2 WAT   3425      6.236  16.265    5.305   1.00 24.87
ATOM   20356   OH2 WAT   3426      7.628 -26.541   40.424   1.00 27.19
```

```
ATOM   20357   OH2 WAT   3427     10.084     5.888   54.362   1.00  18.70
ATOM   20358   OH2 WAT   3428    -27.669    -4.824   17.585   1.00  22.63
ATOM   20359   OH2 WAT   3429     16.131   -57.526   20.651   1.00  27.80
ATOM   20360   OH2 WAT   3430     33.810   -10.761   21.863   1.00  20.66
ATOM   20361   OH2 WAT   3431     38.906    -5.089  -12.711   1.00  32.66
ATOM   20362   OH2 WAT   3432      3.036     6.220   15.329   1.00  21.16
ATOM   20363   OH2 WAT   3433     -5.338     0.253   17.916   1.00  28.50
ATOM   20364   OH2 WAT   3434     -6.431    25.378   65.275   1.00  28.77
ATOM   20365   OH2 WAT   3435     30.183   -20.851   68.133   1.00  27.16
ATOM   20366   OH2 WAT   3436     43.659   -22.333   -1.106   1.00  24.34
ATOM   20367   OH2 WAT   3437     30.093    19.087   34.416   1.00  35.14
ATOM   20368   OH2 WAT   3438    -30.035    -9.535   13.285   1.00  30.59
ATOM   20369   OH2 WAT   3439    -17.340   -10.617   62.281   1.00  21.35
ATOM   20370   OH2 WAT   3440      4.191    -8.621   64.549   1.00  25.99
ATOM   20371   OH2 WAT   3441     26.000    -4.755   17.793   1.00  27.01
ATOM   20372   OH2 WAT   3442     -7.412    21.856  -20.059   1.00  21.29
ATOM   20373   OH2 WAT   3443     -7.879    17.002    4.254   1.00  26.02
ATOM   20374   OH2 WAT   3444     -9.087    -0.369    8.012   1.00  22.06
ATOM   20375   OH2 WAT   3445    -23.952     1.102   -9.034   1.00  28.67
ATOM   20376   OH2 WAT   3446    -10.640    18.228   58.792   1.00  24.48
ATOM   20377   OH2 WAT   3447    -28.943     1.338   47.872   1.00  24.52
ATOM   20378   OH2 WAT   3448      6.713   -26.895   47.186   1.00  25.17
ATOM   20379   OH2 WAT   3449    -19.226     4.149    7.394   1.00  20.22
ATOM   20380   OH2 WAT   3450     16.180   -54.471   16.613   1.00  19.97
ATOM   20381   OH2 WAT   3451      7.659    -6.722  -19.699   1.00  24.66
ATOM   20382   OH2 WAT   3452     37.335    -8.150   16.691   1.00  18.64
ATOM   20383   OH2 WAT   3453     20.745    12.571   18.819   1.00  24.11
ATOM   20384   OH2 WAT   3454    -17.203    -1.956   26.377   1.00  19.51
ATOM   20385   OH2 WAT   3455     15.288   -15.336   31.913   1.00  18.81
ATOM   20386   OH2 WAT   3456      8.707   -48.754   10.866   1.00  27.33
ATOM   20387   OH2 WAT   3457     15.343    19.454   38.824   1.00  23.12
ATOM   20388   OH2 WAT   3458     20.577   -15.545   35.392   1.00  27.66
ATOM   20389   OH2 WAT   3459     41.003     1.947   26.461   1.00  21.44
ATOM   20390   OH2 WAT   3460    -19.312    17.129   -0.087   1.00  24.24
ATOM   20391   OH2 WAT   3461     41.814   -22.072   59.142   1.00  29.16
ATOM   20392   OH2 WAT   3462    -23.822    -2.922   29.368   1.00  26.46
ATOM   20393   OH2 WAT   3463    -19.777   -17.397   63.713   1.00  22.86
ATOM   20394   OH2 WAT   3464      9.958    49.419   21.653   1.00  31.91
ATOM   20395   OH2 WAT   3465    -14.397     0.840    6.887   1.00  19.97
ATOM   20396   OH2 WAT   3466     41.165     1.509   54.227   1.00  20.56
ATOM   20397   OH2 WAT   3467     34.145   -48.601   22.561   1.00  23.68
ATOM   20398   OH2 WAT   3468     14.133    -2.489  -25.544   1.00  32.11
ATOM   20399   OH2 WAT   3469     -1.808   -41.623   29.404   1.00  23.41
ATOM   20400   OH2 WAT   3470     37.724   -31.627   30.385   1.00  31.57
ATOM   20401   OH2 WAT   3471     14.985   -55.814   12.662   1.00  21.80
ATOM   20402   OH2 WAT   3472     24.908   -25.348   43.709   1.00  20.59
ATOM   20403   OH2 WAT   3473     25.698   -49.669   27.512   1.00  22.17
ATOM   20404   OH2 WAT   3474     17.811   -17.127   39.808   1.00  17.19
ATOM   20405   OH2 WAT   3475     21.718    14.837    7.814   1.00  24.90
ATOM   20406   OH2 WAT   3476     22.441    -3.352   58.930   1.00  24.81
ATOM   20407   OH2 WAT   3477     24.448    30.315   43.032   1.00  26.95
ATOM   20408   OH2 WAT   3478     44.123    12.038   19.936   1.00  31.08
ATOM   20409   OH2 WAT   3479     20.286   -30.479   61.570   1.00  20.29
ATOM   20410   OH2 WAT   3480     38.326   -19.073   41.512   1.00  22.18
ATOM   20411   OH2 WAT   3481    -14.815    27.992   61.688   1.00  40.66
ATOM   20412   OH2 WAT   3482     34.625   -26.878   39.822   1.00  33.03
ATOM   20413   OH2 WAT   3483     -3.096    35.761    7.054   1.00  38.60
ATOM   20414   OH2 WAT   3484      9.956   -32.525   39.001   1.00  30.29
ATOM   20415   OH2 WAT   3485      4.975   -31.893   10.831   1.00  21.28
ATOM   20416   OH2 WAT   3486     17.184   -13.200  -22.519   1.00  28.57
ATOM   20417   OH2 WAT   3487      7.504    28.777   40.806   1.00  31.23
ATOM   20418   OH2 WAT   3488     -9.436    22.775   21.943   1.00  18.82
ATOM   20419   OH2 WAT   3489     29.474     3.455    1.487   1.00  32.63
ATOM   20420   OH2 WAT   3490      0.602    20.241    7.100   1.00  22.23
ATOM   20421   OH2 WAT   3491      9.850    -7.937    5.724   1.00  28.64
ATOM   20422   OH2 WAT   3492     32.489   -21.034  -10.996   1.00  30.63
ATOM   20423   OH2 WAT   3493      7.930   -16.894   18.890   1.00  20.22
ATOM   20424   OH2 WAT   3494     -4.506   -24.196    3.635   1.00  18.30
ATOM   20425   OH2 WAT   3495     10.221   -19.687   36.867   1.00  24.52
ATOM   20426   OH2 WAT   3496     -1.557    19.729   17.609   1.00  19.45
ATOM   20427   OH2 WAT   3497    -29.812    -4.805   64.317   1.00  19.66
ATOM   20428   OH2 WAT   3498    -26.364     8.727   -2.492   1.00  23.78
ATOM   20429   OH2 WAT   3499      3.181   -15.486   54.400   1.00  26.52
ATOM   20430   OH2 WAT   3500     -4.211    28.797   70.359   1.00  29.23
ATOM   20431   OH2 WAT   3501     23.091    -1.819  -22.141   1.00  27.87
ATOM   20432   OH2 WAT   3502     53.226     7.462   46.155   1.00  28.40
ATOM   20433   OH2 WAT   3503     47.327    21.844   54.130   1.00  25.03
```

```
ATOM   20434   OH2 WAT   3504     -7.836   15.601   26.509   1.00 22.64
ATOM   20435   OH2 WAT   3505      4.797  -16.467   -3.276   1.00 30.07
ATOM   20436   OH2 WAT   3506     31.664   -6.522  -13.027   1.00 22.55
ATOM   20437   OH2 WAT   3507     21.645   31.075   60.847   1.00 17.96
ATOM   20438   OH2 WAT   3508     14.391    8.824   50.006   1.00 23.64
ATOM   20439   OH2 WAT   3509    -17.132    4.640   49.766   1.00 23.89
ATOM   20440   OH2 WAT   3510      6.062  -26.464   52.738   1.00 30.15
ATOM   20441   OH2 WAT   3511      5.200   26.208   12.471   1.00 34.21
ATOM   20442   OH2 WAT   3512     16.071    0.370  -25.723   1.00 33.79
ATOM   20443   OH2 WAT   3513     32.797   -0.260   48.448   1.00 20.41
ATOM   20444   OH2 WAT   3514    -16.216    1.768    0.259   1.00 23.90
ATOM   20445   OH2 WAT   3515     -5.097    2.007    1.772   1.00 19.02
ATOM   20446   OH2 WAT   3516    -14.399  -28.368   53.744   1.00 43.61
ATOM   20447   OH2 WAT   3517      1.256  -15.041    9.961   1.00 24.99
ATOM   20448   OH2 WAT   3518     29.943   12.201   27.604   1.00 32.31
ATOM   20449   OH2 WAT   3519     20.357   22.467   26.147   1.00 24.34
ATOM   20450   OH2 WAT   3520     11.136  -14.234   75.415   1.00 25.64
ATOM   20451   OH2 WAT   3521     38.180  -15.356   56.012   1.00 22.35
ATOM   20452   OH2 WAT   3522     24.649  -24.017    2.168   1.00 29.47
ATOM   20453   OH2 WAT   3523     36.842    8.360   26.719   1.00 24.17
ATOM   20454   OH2 WAT   3524    -30.258   -8.726   23.554   1.00 27.51
ATOM   20455   OH2 WAT   3525     17.453  -26.604   11.072   1.00 24.69
ATOM   20456   OH2 WAT   3526     -0.804  -51.986   25.853   1.00 26.03
ATOM   20457   OH2 WAT   3527     -9.459  -21.976   39.845   1.00 29.39
ATOM   20458   OH2 WAT   3528     29.511   -4.884   16.485   1.00 27.39
ATOM   20459   OH2 WAT   3529     14.158   -1.502    9.556   1.00 35.97
ATOM   20460   OH2 WAT   3530    -14.703   20.404   38.717   1.00 28.71
ATOM   20461   OH2 WAT   3531     -7.105    1.156  -13.754   1.00 18.83
ATOM   20462   OH2 WAT   3532     21.848  -21.505   48.844   1.00 27.48
ATOM   20463   OH2 WAT   3533     36.224   -2.915   32.963   1.00 27.24
ATOM   20464   OH2 WAT   3534     23.251   23.615   68.702   1.00 18.75
ATOM   20465   OH2 WAT   3535    -13.136  -41.931    8.140   1.00 22.80
ATOM   20466   OH2 WAT   3536     -3.662   29.839   18.235   1.00 22.35
ATOM   20467   OH2 WAT   3537     42.444  -25.120   50.779   1.00 30.29
ATOM   20468   OH2 WAT   3538     30.684   13.800   60.308   1.00 26.04
ATOM   20469   OH2 WAT   3539     -1.141   19.587   14.828   1.00 19.25
ATOM   20470   OH2 WAT   3540     -5.566  -28.227   31.527   1.00 31.13
ATOM   20471   OH2 WAT   3541     37.483   -2.016   49.590   1.00 23.36
ATOM   20472   OH2 WAT   3542     -4.059   -1.055   -0.721   1.00 31.71
ATOM   20473   OH2 WAT   3543     43.257   -3.965   48.382   1.00 24.84
ATOM   20474   OH2 WAT   3544     16.003   15.425   17.335   1.00 27.51
ATOM   20475   OH2 WAT   3545    -12.199   21.137   35.789   1.00 24.22
ATOM   20476   OH2 WAT   3546     43.270   11.938   40.176   1.00 30.17
ATOM   20477   OH2 WAT   3547      8.127  -56.905   24.805   1.00 19.10
ATOM   20478   OH2 WAT   3548     20.613   33.154   62.310   1.00 30.19
ATOM   20479   OH2 WAT   3549     25.111   15.458   30.152   1.00 22.79
ATOM   20480   OH2 WAT   3550     45.070    2.400   26.630   1.00 30.97
ATOM   20481   OH2 WAT   3551      2.048  -27.128   63.747   1.00 22.51
ATOM   20482   OH2 WAT   3552     -5.000    1.632  -22.794   1.00 28.73
ATOM   20483   OH2 WAT   3553     40.494  -30.756   61.314   1.00 31.19
ATOM   20484   OH2 WAT   3554     21.635   29.643   51.600   1.00 24.47
ATOM   20485   OH2 WAT   3555     20.234   18.268   52.367   1.00 25.61
ATOM   20486   OH2 WAT   3556      6.420    8.840   15.848   1.00 17.10
ATOM   20487   OH2 WAT   3557    -23.960  -31.184   20.786   1.00 23.74
ATOM   20488   OH2 WAT   3558      3.694  -28.168   52.744   1.00 28.76
ATOM   20489   OH2 WAT   3559     -0.279   24.388   69.202   1.00 29.63
ATOM   20490   OH2 WAT   3560    -13.233  -14.029    5.054   1.00 30.16
ATOM   20491   OH2 WAT   3561    -11.730    2.751   48.422   1.00 23.44
ATOM   20492   OH2 WAT   3562     25.841   -1.986   41.378   1.00 30.71
ATOM   20493   OH2 WAT   3563    -19.840    9.517   11.289   1.00 30.98
ATOM   20494   OH2 WAT   3564     35.901  -16.807   38.350   1.00 23.60
ATOM   20495   OH2 WAT   3565      5.279   14.511   23.101   1.00 32.53
ATOM   20496   OH2 WAT   3566    -12.669   24.543   21.588   1.00 27.87
ATOM   20497   OH2 WAT   3567      2.422   29.279   73.739   1.00 26.24
ATOM   20498   OH2 WAT   3568     24.933    2.790   38.157   1.00 31.71
ATOM   20499   OH2 WAT   3569     -6.126   31.127   44.730   1.00 24.66
ATOM   20500   OH2 WAT   3570     12.732  -49.375   29.754   1.00 24.42
ATOM   20501   OH2 WAT   3571     54.364   -4.263   57.668   1.00 28.75
ATOM   20502   OH2 WAT   3572      8.524    5.432   51.993   1.00 29.48
ATOM   20503   OH2 WAT   3573      2.845  -17.320   27.601   1.00 23.94
ATOM   20504   OH2 WAT   3574    -16.502   21.486  -18.054   1.00 27.10
ATOM   20505   OH2 WAT   3575     43.324   21.268   62.048   1.00 21.29
ATOM   20506   OH2 WAT   3576    -13.809  -17.874   23.626   1.00 21.22
ATOM   20507   OH2 WAT   3577      6.416  -10.418   67.564   1.00 25.45
ATOM   20508   OH2 WAT   3578     23.420  -23.177   10.075   1.00 31.50
ATOM   20509   OH2 WAT   3579     18.146    5.699   42.569   1.00 27.60
ATOM   20510   OH2 WAT   3580     10.508   14.399   39.740   1.00 21.36
```

```
ATOM    20511  OH2 WAT   3581      0.784  -6.629   15.625  1.00 15.08
ATOM    20512  OH2 WAT   3582      5.497 -17.436   23.138  1.00 25.09
ATOM    20513  OH2 WAT   3583      7.991   6.071   43.749  1.00 15.60
ATOM    20514  OH2 WAT   3584      3.189 -11.871   38.573  1.00 16.47
ATOM    20515  OH2 WAT   3585     -0.207 -12.212   31.665  1.00 17.46
ATOM    20516  OH2 WAT   3586     13.002 -15.561   35.959  1.00 21.13
ATOM    20517  OH2 WAT   3587     20.589  15.736   21.973  1.00 26.75
ATOM    20518  OH2 WAT   3588     21.090   3.770   13.740  1.00 22.84
ATOM    20519  OH2 WAT   3589      9.607  17.572   31.827  1.00 19.08
ATOM    20520  OH2 WAT   3590      0.276 -14.520   35.798  1.00 20.57
ATOM    20521  OH2 WAT   3591    -13.859  19.020  -13.607  1.00 20.14
ATOM    20522  OH2 WAT   3592     22.420  11.927   35.726  1.00 18.41
ATOM    20523  OH2 WAT   3593     -3.566  -2.525   -6.831  1.00 34.12
ATOM    20524  OH2 WAT   3594     24.320   2.280   42.362  1.00 24.09
ATOM    20525  OH2 WAT   3595     19.088   0.614   44.019  1.00 22.35
ATOM    20526  OH2 WAT   3596     15.248   1.171  -17.886  1.00 22.97
ATOM    20527  OH2 WAT   3597     24.372   9.943   24.127  1.00 21.06
ATOM    20528  OH2 WAT   3598     16.764  -1.795   47.475  1.00 21.98
ATOM    20529  OH2 WAT   3599      0.414  -0.352   12.854  1.00 18.76
ATOM    20530  OH2 WAT   3600     -4.201 -10.546   27.179  1.00 23.37
ATOM    20531  OH2 WAT   3601      6.884  -2.275   45.268  1.00 28.10
ATOM    20532  OH2 WAT   3602     23.685  15.179   34.059  1.00 22.99
ATOM    20533  OH2 WAT   3603      2.551 -10.373   13.582  1.00 21.06
ATOM    20534  OH2 WAT   3604     21.695   8.786   16.503  1.00 23.43
ATOM    20535  OH2 WAT   3605     12.902   6.151   48.325  1.00 21.73
ATOM    20536  OH2 WAT   3606      9.189   5.244   48.426  1.00 21.63
ATOM    20537  OH2 WAT   3607      2.378 -10.193   17.669  1.00 16.25
ATOM    20538  OH2 WAT   3608      4.820 -14.212   23.885  1.00 30.32
ATOM    20539  OH2 WAT   3609     42.612  26.598   65.519  1.00 33.56
ATOM    20540  OH2 WAT   3610     12.232  -7.077   44.497  1.00 15.58
ATOM    20541  OH2 WAT   3611     11.183 -17.225   30.756  1.00 22.33
ATOM    20542  OH2 WAT   3612     34.209  -6.592  -13.887  1.00 24.62
ATOM    20543  OH2 WAT   3613      6.463  24.230    7.734  1.00 20.77
ATOM    20544  OH2 WAT   3614     33.223  -2.006    8.282  1.00 23.63
ATOM    20545  OH2 WAT   3615    -11.992 -21.341   31.338  1.00 21.59
ATOM    20546  OH2 WAT   3616     20.404 -27.602   62.377  1.00 21.88
ATOM    20547  OH2 WAT   3617     10.020 -10.313   43.379  1.00 30.16
ATOM    20548  OH2 WAT   3618     10.356 -15.159   17.815  1.00 21.94
ATOM    20549  OH2 WAT   3619      1.389 -11.017   36.934  1.00 20.03
ATOM    20550  OH2 WAT   3620      4.363 -14.468   52.055  1.00 24.43
ATOM    20551  OH2 WAT   3621     27.484   2.764   55.962  1.00 21.15
ATOM    20552  OH2 WAT   3622     24.726 -24.186   16.875  1.00 24.05
ATOM    20553  OH2 WAT   3623      0.014 -20.733   40.658  1.00 16.17
ATOM    20554  OH2 WAT   3624      2.725   4.728   52.388  1.00 26.67
ATOM    20555  OH2 WAT   3625      9.746 -14.612   38.887  1.00 21.86
ATOM    20556  OH2 WAT   3626     -4.757  -1.899    1.970  1.00 35.13
ATOM    20557  OH2 WAT   3627     16.835   4.432   45.116  1.00 18.72
ATOM    20558  OH2 WAT   3628     12.251 -47.696    7.896  1.00 22.73
ATOM    20559  OH2 WAT   3629     39.019 -10.307   16.860  1.00 20.92
ATOM    20560  OH2 WAT   3630    -15.949 -40.710   24.697  1.00 22.11
ATOM    20561  OH2 WAT   3631     25.811 -15.143   32.335  1.00 27.41
ATOM    20562  OH2 WAT   3632     15.761  -3.942   44.388  1.00 18.59
ATOM    20563  OH2 WAT   3633     31.978 -22.985   68.623  1.00 27.31
ATOM    20564  OH2 WAT   3634    -26.509  -0.176   42.412  1.00 18.54
ATOM    20565  OH2 WAT   3635    -15.520 -42.723   20.234  1.00 26.20
ATOM    20566  OH2 WAT   3636     12.167 -11.989   10.440  1.00 19.28
ATOM    20567  OH2 WAT   3637     -4.154 -47.994   12.332  1.00 35.26
ATOM    20568  OH2 WAT   3638     -1.615   3.195   59.259  1.00 25.77
ATOM    20569  OH2 WAT   3639     -9.493  -3.891   48.064  1.00 28.70
ATOM    20570  OH2 WAT   3640     16.898   8.348  -11.925  1.00 34.50
ATOM    20571  OH2 WAT   3641     32.002 -14.281  -16.376  1.00 28.21
ATOM    20572  OH2 WAT   3642     -2.196 -11.144    8.403  1.00 24.46
ATOM    20573  OH2 WAT   3643     29.916  22.387   32.574  1.00 37.43
ATOM    20574  OH2 WAT   3644     18.608  21.247   53.393  1.00 17.98
ATOM    20575  OH2 WAT   3645     38.976 -31.818   26.231  1.00 30.85
ATOM    20576  OH2 WAT   3646     20.552  -7.819   18.900  1.00 25.27
ATOM    20577  OH2 WAT   3647     12.060   9.642    9.127  1.00 22.18
ATOM    20578  OH2 WAT   3648    -31.694 -12.599   11.058  1.00 34.99
ATOM    20579  OH2 WAT   3649     37.537  -7.544   19.487  1.00 26.06
ATOM    20580  OH2 WAT   3650      0.189 -29.389   54.461  1.00 23.97
ATOM    20581  OH2 WAT   3651     -5.852 -18.327   36.510  1.00 26.63
ATOM    20582  OH2 WAT   3652     14.864  -9.336   13.735  1.00 20.83
ATOM    20583  OH2 WAT   3653    -12.948   3.519  -18.993  1.00 25.64
ATOM    20584  OH2 WAT   3654    -12.613   2.553   24.159  1.00 22.97
ATOM    20585  OH2 WAT   3655     25.889 -19.104  -21.194  1.00 24.77
ATOM    20586  OH2 WAT   3656     31.173  -1.987   20.477  1.00 24.59
ATOM    20587  OH2 WAT   3657     40.085 -39.316   22.789  1.00 28.48
```

```
ATOM  20588  OH2 WAT  3658      3.870 -32.022    8.417  1.00 26.65
ATOM  20589  OH2 WAT  3659     18.544 -28.551   16.087  1.00 34.40
ATOM  20590  OH2 WAT  3660     -6.861 -27.077   47.127  1.00 22.70
ATOM  20591  OH2 WAT  3661     13.344 -12.961   12.757  1.00 21.21
ATOM  20592  OH2 WAT  3662     23.924  13.058   30.417  1.00 26.23
ATOM  20593  OH2 WAT  3663    -16.463   0.666   27.530  1.00 23.58
ATOM  20594  OH2 WAT  3664     29.982 -28.850   48.332  1.00 25.57
ATOM  20595  OH2 WAT  3665    -17.510   7.033   13.800  1.00 22.45
ATOM  20596  OH2 WAT  3666      1.881 -15.322   29.876  1.00 24.08
ATOM  20597  OH2 WAT  3667      6.507  -5.396   11.525  1.00 29.49
ATOM  20598  OH2 WAT  3668     46.905   1.491   23.229  1.00 29.41
ATOM  20599  OH2 WAT  3669    -32.090  -8.170   19.323  1.00 30.01
ATOM  20600  OH2 WAT  3670     22.927 -19.385   47.561  1.00 22.37
ATOM  20601  OH2 WAT  3671    -22.132  17.236    0.786  1.00 28.38
ATOM  20602  OH2 WAT  3672     33.600 -44.658   11.611  1.00 34.36
ATOM  20603  OH2 WAT  3673    -13.806   7.350   36.529  1.00 29.31
ATOM  20604  OH2 WAT  3674    -27.433 -25.257    7.569  1.00 36.53
ATOM  20605  OH2 WAT  3675     -8.731  -1.580   30.817  1.00 29.08
ATOM  20606  OH2 WAT  3676     20.432  -3.056   56.541  1.00 26.44
ATOM  20607  OH2 WAT  3677      3.370 -13.090   13.599  1.00 17.38
ATOM  20608  OH2 WAT  3678      8.012 -34.825   12.677  1.00 31.51
ATOM  20609  OH2 WAT  3679      1.072 -19.415    5.239  1.00 20.20
ATOM  20610  OH2 WAT  3680     21.321   8.443   12.592  1.00 22.90
ATOM  20611  OH2 WAT  3681     52.644   0.777   61.381  1.00 35.77
ATOM  20612  OH2 WAT  3682     -3.097 -41.815    7.665  1.00 31.57
ATOM  20613  OH2 WAT  3683     20.159 -13.750   38.154  1.00 29.71
ATOM  20614  OH2 WAT  3684     -9.685  15.081   52.281  1.00 25.91
ATOM  20615  OH2 WAT  3685     28.135  20.650    0.860  1.00 27.21
ATOM  20616  OH2 WAT  3686     39.001 -41.238   18.806  1.00 26.62
ATOM  20617  OH2 WAT  3687     40.023  -7.002   42.151  1.00 26.60
ATOM  20618  OH2 WAT  3688    -17.015   2.383    5.482  1.00 22.76
ATOM  20619  OH2 WAT  3689     31.736 -26.387   15.172  1.00 27.64
ATOM  20620  OH2 WAT  3690     37.471  -8.993  -17.582  1.00 30.40
ATOM  20621  OH2 WAT  3691     10.812  10.675   11.247  1.00 23.49
ATOM  20622  OH2 WAT  3692     36.504 -25.533   25.441  1.00 23.11
ATOM  20623  OH2 WAT  3693     22.254 -32.457   61.678  1.00 26.40
ATOM  20624  OH2 WAT  3694     11.931 -14.704    7.800  1.00 21.35
ATOM  20625  OH2 WAT  3695    -23.681 -14.788   45.643  1.00 24.78
ATOM  20626  OH2 WAT  3696      7.182 -51.466   28.627  1.00 25.44
ATOM  20627  OH2 WAT  3697    -22.958  -2.211   23.235  1.00 26.83
ATOM  20628  OH2 WAT  3698     32.975 -23.395   -0.121  1.00 22.51
ATOM  20629  OH2 WAT  3699     -4.858   3.626    3.892  1.00 28.24
ATOM  20630  OH2 WAT  3700    -25.802 -17.472   57.336  1.00 24.02
ATOM  20631  OH2 WAT  3701    -24.961  -8.029   27.571  1.00 30.46
ATOM  20632  OH2 WAT  3702    -19.843   6.476   47.329  1.00 25.78
ATOM  20633  OH2 WAT  3703    -22.522  14.871    2.427  1.00 24.66
ATOM  20634  OH2 WAT  3704     18.502  41.801   32.590  1.00 31.05
ATOM  20635  OH2 WAT  3705     -2.285  23.880  -16.394  1.00 41.88
ATOM  20636  OH2 WAT  3706      9.076   7.121   12.265  1.00 24.55
ATOM  20637  OH2 WAT  3707     22.472  16.738   36.131  1.00 28.80
ATOM  20638  OH2 WAT  3708     23.106  19.524   28.362  1.00 29.35
ATOM  20639  OH2 WAT  3709     20.660  -1.685   53.178  1.00 28.07
ATOM  20640  OH2 WAT  3710     47.414 -15.667    4.341  1.00 26.85
ATOM  20641  OH2 WAT  3711     35.787 -27.874   44.447  1.00 27.28
ATOM  20642  OH2 WAT  3712     -9.662  17.345   32.733  1.00 23.43
ATOM  20643  OH2 WAT  3713    -23.756 -18.816   55.654  1.00 27.14
ATOM  20644  OH2 WAT  3714     26.158 -26.333   67.093  1.00 25.71
ATOM  20645  OH2 WAT  3715      8.560  15.732   30.041  1.00 29.85
ATOM  20646  OH2 WAT  3716     47.272  25.719   59.342  1.00 32.35
ATOM  20647  OH2 WAT  3717     17.487  -9.851  -23.543  1.00 38.83
ATOM  20648  OH2 WAT  3718    -18.150  -9.422   11.110  1.00 24.14
ATOM  20649  OH2 WAT  3719     28.787 -33.914   15.756  1.00 21.48
ATOM  20650  OH2 WAT  3720     -2.825   9.854   58.691  1.00 29.62
ATOM  20651  OH2 WAT  3721     35.002 -40.084   48.371  1.00 34.58
ATOM  20652  OH2 WAT  3722     33.278 -36.251   12.757  1.00 26.17
ATOM  20653  OH2 WAT  3723      7.979 -20.213   33.159  1.00 18.19
ATOM  20654  OH2 WAT  3724    -18.398  28.206   46.922  1.00 33.34
ATOM  20655  OH2 WAT  3725     14.111  10.971   39.946  1.00 39.42
ATOM  20656  OH2 WAT  3726     20.899 -23.856   76.684  1.00 26.04
ATOM  20657  OH2 WAT  3727     12.600 -30.532   39.040  1.00 49.07
ATOM  20658  OH2 WAT  3728      0.214 -28.712   62.508  1.00 28.93
ATOM  20659  OH2 WAT  3729     29.212  -6.590    4.979  1.00 24.84
ATOM  20660  OH2 WAT  3730    -17.997  34.615   48.280  1.00 28.78
ATOM  20661  OH2 WAT  3731     21.283  23.102   66.907  1.00 26.75
ATOM  20662  OH2 WAT  3732      6.942 -10.436   70.783  1.00 30.98
ATOM  20663  OH2 WAT  3733    -13.774   4.431   49.066  1.00 24.84
ATOM  20664  OH2 WAT  3734     27.594   0.198   38.138  1.00 33.10
```

```
ATOM   20665   OH2 WAT   3735      20.794   11.104   12.321   1.00 27.55
ATOM   20666   OH2 WAT   3736      51.256   16.589   59.899   1.00 30.84
ATOM   20667   OH2 WAT   3737      22.183  -14.735   24.243   1.00 28.02
ATOM   20668   OH2 WAT   3738      44.096  -11.703   13.054   1.00 28.23
ATOM   20669   OH2 WAT   3739      18.453  -23.992   49.772   1.00 32.67
ATOM   20670   OH2 WAT   3740      10.967   16.592   34.278   1.00 31.80
ATOM   20671   OH2 WAT   3741      -9.858    9.563   20.327   1.00 20.75
ATOM   20672   OH2 WAT   3742       0.898   42.404    5.444   1.00 33.16
ATOM   20673   OH2 WAT   3743       3.933  -29.127   37.039   1.00 23.75
ATOM   20674   OH2 WAT   3744      36.228  -24.732   33.177   1.00 44.37
ATOM   20675   OH2 WAT   3745       3.159    7.122   37.485   1.00 29.60
ATOM   20676   OH2 WAT   3746     -10.921    2.269   51.233   1.00 27.65
ATOM   20677   OH2 WAT   3747      53.348   17.944   49.378   1.00 27.14
ATOM   20678   OH2 WAT   3748       7.606   22.178   51.653   1.00 40.12
ATOM   20679   OH2 WAT   3749      39.204  -34.717   27.730   1.00 24.03
ATOM   20680   OH2 WAT   3750      13.564   19.874   31.976   1.00 23.45
ATOM   20681   OH2 WAT   3751      -3.814  -23.747   36.732   1.00 26.02
ATOM   20682   OH2 WAT   3752      47.146   16.831   44.337   1.00 26.65
ATOM   20683   OH2 WAT   3753      13.930  -30.419   44.084   1.00 25.81
ATOM   20684   OH2 WAT   3754       9.861   -9.263    8.727   1.00 30.58
ATOM   20685   OH2 WAT   3755      23.683   32.606   59.197   1.00 32.94
ATOM   20686   OH2 WAT   3756      20.056   31.032   18.101   1.00 36.08
ATOM   20687   OH2 WAT   3757     -10.879   29.267   63.971   1.00 35.86
ATOM   20688   OH2 WAT   3758       4.038  -17.119   70.287   1.00 32.53
ATOM   20689   OH2 WAT   3759      -8.558  -23.729    1.645   1.00 40.40
ATOM   20690   OH2 WAT   3760      -9.873   16.727   21.573   1.00 27.26
ATOM   20691   OH2 WAT   3761      35.205  -25.918   42.503   1.00 30.87
ATOM   20692   OH2 WAT   3762       1.971   24.125   46.097   1.00 25.29
ATOM   20693   OH2 WAT   3763      53.325   -5.919   60.231   1.00 28.08
ATOM   20694   OH2 WAT   3764      10.053   18.498    6.878   1.00 33.94
ATOM   20695   OH2 WAT   3765      19.406  -29.642   19.266   1.00 28.80
ATOM   20696   OH2 WAT   3766      16.098   14.581   21.816   1.00 36.36
ATOM   20697   OH2 WAT   3767      -6.338   25.111   -7.103   1.00 28.61
ATOM   20698   OH2 WAT   3768      48.102   21.342    3.587   1.00 36.19
ATOM   20699   OH2 WAT   3769      -9.125  -25.882   48.916   1.00 39.40
ATOM   20700   OH2 WAT   3770       6.373   14.161   30.878   1.00 25.95
ATOM   20701   OH2 WAT   3771      18.098   37.562   30.318   1.00 29.01
ATOM   20702   OH2 WAT   3772      -4.272  -41.366   30.616   1.00 33.77
ATOM   20703   OH2 WAT   3773     -24.088  -15.889   26.441   1.00 33.05
ATOM   20704   OH2 WAT   3774       5.765   13.265   64.636   1.00 43.14
ATOM   20705   OH2 WAT   3775     -24.832   -2.210   12.951   1.00 32.20
ATOM   20706   OH2 WAT   3776      35.826  -23.014   22.538   1.00 27.58
ATOM   20707   OH2 WAT   3777      34.896  -31.558   17.395   1.00 35.22
ATOM   20708   OH2 WAT   3778      12.653   27.171   37.327   1.00 34.77
ATOM   20709   OH2 WAT   3779      26.085    8.717    7.225   1.00 27.52
ATOM   20710   OH2 WAT   3780      14.808   13.935    2.743   1.00 28.55
ATOM   20711   OH2 WAT   3781       7.008   41.307    8.799   1.00 21.88
ATOM   20712   OH2 WAT   3782     -29.750  -15.615   50.483   1.00 33.58
ATOM   20713   OH2 WAT   3783      42.042    7.501   10.339   1.00 32.40
ATOM   20714   OH2 WAT   3784      38.647  -37.049   26.470   1.00 27.62
ATOM   20715   OH2 WAT   3785      20.114  -10.501   38.007   1.00 33.84
ATOM   20716   OH2 WAT   3786      33.193   13.567    2.822   1.00 33.07
ATOM   20717   OH2 WAT   3787      41.018   -5.644    6.389   1.00 32.27
ATOM   20718   OH2 WAT   3788       1.927   13.217   17.887   1.00 23.25
ATOM   20719   OH2 WAT   3789       0.063  -39.198    5.123   1.00 40.67
ATOM   20720   OH2 WAT   3790      14.610   -2.645   49.001   1.00 23.41
ATOM   20721   OH2 WAT   3791      29.017  -41.765   34.853   1.00 29.00
ATOM   20722   OH2 WAT   3792      16.478   28.346   37.634   1.00 26.47
ATOM   20723   OH2 WAT   3793       2.863  -52.758   24.049   1.00 35.61
ATOM   20724   OH2 WAT   3794     -11.416   19.596   17.671   1.00 27.30
ATOM   20725   OH2 WAT   3795      32.706  -47.734   14.100   1.00 27.60
ATOM   20726   OH2 WAT   3796       3.656    6.892   17.830   1.00 29.51
ATOM   20727   OH2 WAT   3797      34.924  -21.245  -11.957   1.00 26.01
ATOM   20728   OH2 WAT   3798     -23.350    8.284   62.170   1.00 26.06
ATOM   20729   OH2 WAT   3799      21.618    5.515   19.392   1.00 30.34
ATOM   20730   OH2 WAT   3800       3.296   31.352   59.084   1.00 20.90
ATOM   20731   OH2 WAT   3801      11.215   -4.478   10.504   1.00 26.27
ATOM   20732   OH2 WAT   3802      17.465   28.856   49.985   1.00 32.00
ATOM   20733   OH2 WAT   3803      30.546   21.709   36.983   1.00 33.86
ATOM   20734   OH2 WAT   3804     -13.822    6.385   18.289   1.00 26.93
ATOM   20735   OH2 WAT   3805      40.370   26.108   57.308   1.00 33.23
ATOM   20736   OH2 WAT   3806     -18.730   19.657    0.767   1.00 34.40
ATOM   20737   OH2 WAT   3807      46.787  -11.310    5.258   1.00 33.73
ATOM   20738   OH2 WAT   3808       6.196   37.401   65.886   1.00 25.32
ATOM   20739   OH2 WAT   3809      33.898  -16.337   34.979   1.00 25.93
ATOM   20740   OH2 WAT   3810     -29.017  -32.892   18.794   1.00 34.70
ATOM   20741   OH2 WAT   3811       5.143   46.820   14.606   1.00 30.65
```

```
ATOM   20742  OH2 WAT   3812      7.988   -3.484   64.242  1.00 31.97
ATOM   20743  OH2 WAT   3813      5.432   -9.598   10.054  1.00 29.06
ATOM   20744  OH2 WAT   3814     19.243    6.256   -9.064  1.00 30.91
ATOM   20745  OH2 WAT   3815     43.635  -21.259   49.737  1.00 28.64
ATOM   20746  OH2 WAT   3816     -5.313    6.920   37.151  1.00 30.93
ATOM   20747  OH2 WAT   3817      4.504   24.582   -5.136  1.00 32.05
ATOM   20748  OH2 WAT   3818     10.520    3.740  -26.086  1.00 34.31
ATOM   20749  OH2 WAT   3819     62.545   14.377   25.314  1.00 43.40
ATOM   20750  OH2 WAT   3820      9.862  -15.964   13.553  1.00 29.65
ATOM   20751  OH2 WAT   3821     -0.387  -50.398   19.754  1.00 33.87
ATOM   20752  OH2 WAT   3822      2.304   -6.547   19.517  1.00 31.26
ATOM   20753  OH2 WAT   3823     41.519  -23.035   -7.279  1.00 42.38
ATOM   20754  OH2 WAT   3824     16.162  -20.007   75.071  1.00 26.45
ATOM   20755  OH2 WAT   3825     10.546  -21.372    6.968  1.00 26.45
ATOM   20756  OH2 WAT   3826    -11.694  -23.711   34.633  1.00 29.90
ATOM   20757  OH2 WAT   3827     14.382  -28.322   57.340  1.00 41.11
ATOM   20758  OH2 WAT   3828     33.815  -17.624   23.792  1.00 26.84
ATOM   20759  OH2 WAT   3829    -10.831   -0.831    4.970  1.00 24.36
ATOM   20760  OH2 WAT   3830      7.070   13.238  -20.561  1.00 30.58
ATOM   20761  OH2 WAT   3831     -1.423  -43.194   35.158  1.00 28.74
ATOM   20762  OH2 WAT   3832     16.519  -33.636   38.322  1.00 24.42
ATOM   20763  OH2 WAT   3833     17.520   22.887   73.186  1.00 33.05
ATOM   20764  OH2 WAT   3834     -2.872   -6.802   25.146  1.00 32.72
ATOM   20765  OH2 WAT   3835     18.475  -54.085   15.078  1.00 34.15
ATOM   20766  OH2 WAT   3836     41.800  -20.963   55.130  1.00 27.59
ATOM   20767  OH2 WAT   3837     -7.482   -4.152   30.462  1.00 29.41
ATOM   20768  OH2 WAT   3838    -17.203  -14.842   28.926  1.00 26.31
ATOM   20769  OH2 WAT   3839     23.941   17.177   27.224  1.00 23.52
ATOM   20770  OH2 WAT   3840    -17.547   18.133  -10.035  1.00 26.05
ATOM   20771  OH2 WAT   3841    -11.739   21.608   19.442  1.00 29.94
ATOM   20772  OH2 WAT   3842     -1.775  -31.809   56.054  1.00 29.15
ATOM   20773  OH2 WAT   3843     26.925  -28.472   40.778  1.00 31.95
ATOM   20774  OH2 WAT   3844     13.649  -18.971    8.359  1.00 28.20
ATOM   20775  OH2 WAT   3845     -1.364   38.574   55.862  1.00 34.22
ATOM   20776  OH2 WAT   3846     49.423   21.080   55.366  1.00 24.86
ATOM   20777  OH2 WAT   3847     -0.268  -12.614    7.599  1.00 38.86
ATOM   20778  OH2 WAT   3848     -4.305  -53.041   14.218  1.00 31.46
ATOM   20779  OH2 WAT   3849     12.067  -31.885   21.029  1.00 27.96
ATOM   20780  OH2 WAT   3850      1.046  -35.638   34.940  1.00 25.32
ATOM   20781  OH2 WAT   3851     -0.470   22.594   36.668  1.00 25.41
ATOM   20782  OH2 WAT   3852     -1.223   -1.667   38.153  1.00 24.06
ATOM   20783  OH2 WAT   3853     24.503   -1.990   58.124  1.00 28.69
ATOM   20784  OH2 WAT   3854     17.864  -13.588   29.400  1.00 23.88
ATOM   20785  OH2 WAT   3855    -28.291  -14.815   57.051  1.00 26.82
ATOM   20786  OH2 WAT   3856     20.622   -5.682   38.418  1.00 33.21
ATOM   20787  OH2 WAT   3857     -7.378  -24.739    4.250  1.00 36.23
ATOM   20788  OH2 WAT   3858     50.437   -6.107   52.678  1.00 25.23
ATOM   20789  OH2 WAT   3859    -32.230   -8.257   14.449  1.00 36.13
ATOM   20790  OH2 WAT   3860     24.061  -50.798   39.085  1.00 41.51
ATOM   20791  OH2 WAT   3861     29.292    7.952   26.061  1.00 36.29
ATOM   20792  OH2 WAT   3862     37.184   10.315   28.928  1.00 28.67
ATOM   20793  OH2 WAT   3863     36.355  -20.183   38.839  1.00 25.50
ATOM   20794  OH2 WAT   3864     -0.607    5.406   54.644  1.00 23.50
ATOM   20795  OH2 WAT   3865     11.302  -47.890   27.551  1.00 20.57
ATOM   20796  OH2 WAT   3866    -15.007   23.732   62.688  1.00 31.11
ATOM   20797  OH2 WAT   3867     42.181  -21.336   46.400  1.00 28.39
ATOM   20798  OH2 WAT   3868     32.816   16.299   26.091  1.00 28.85
ATOM   20799  OH2 WAT   3869     15.315   17.295   25.040  1.00 20.18
ATOM   20800  OH2 WAT   3870      7.289  -17.152   -3.029  1.00 29.44
ATOM   20801  OH2 WAT   3871      2.717   42.008   66.372  1.00 27.89
ATOM   20802  OH2 WAT   3872     34.914  -28.691   18.175  1.00 19.17
ATOM   20803  OH2 WAT   3873     18.616   13.919   13.090  1.00 32.78
ATOM   20804  OH2 WAT   3874    -18.466  -37.393   25.244  1.00 32.88
ATOM   20805  OH2 WAT   3875     12.836   43.517   24.922  1.00 31.86
ATOM   20806  OH2 WAT   3876    -25.602   12.369    0.165  1.00 27.51
ATOM   20807  OH2 WAT   3877     24.200    7.550   21.778  1.00 31.56
ATOM   20808  OH2 WAT   3878     -0.145   -8.461   22.519  1.00 26.05
ATOM   20809  OH2 WAT   3879    -23.514  -16.029   43.033  1.00 33.79
ATOM   20810  OH2 WAT   3880      9.948   50.191   -0.282  1.00 30.98
ATOM   20811  OH2 WAT   3881      2.703  -13.370    5.739  1.00 35.46
ATOM   20812  OH2 WAT   3882     20.914   25.963   17.772  1.00 28.78
ATOM   20813  OH2 WAT   3883     34.528   11.261    3.220  1.00 31.17
ATOM   20814  OH2 WAT   3884     16.134  -53.497   28.465  1.00 33.54
ATOM   20815  OH2 WAT   3885     -2.387   38.437   61.965  1.00 31.00
ATOM   20816  OH2 WAT   3886     43.549   -6.595    8.700  1.00 33.92
ATOM   20817  OH2 WAT   3887     35.170   -2.113    5.111  1.00 23.74
ATOM   20818  OH2 WAT   3888    -25.332  -27.546   33.584  1.00 32.68
```

```
ATOM   20819  OH2 WAT   3889      9.100    5.403   58.911   1.00 28.07
ATOM   20820  OH2 WAT   3890     -2.005    3.998   40.706   1.00 30.75
ATOM   20821  OH2 WAT   3891     -7.292  -27.296    1.998   1.00 38.01
ATOM   20822  OH2 WAT   3892     19.157   -5.927   15.506   1.00 31.49
ATOM   20823  OH2 WAT   3893    -18.372   23.651   43.344   1.00 37.66
ATOM   20824  OH2 WAT   3894     31.262  -51.492   16.861   1.00 24.13
ATOM   20825  OH2 WAT   3895    -26.499    9.900    3.726   1.00 39.65
ATOM   20826  OH2 WAT   3896      4.097   31.182   75.075   1.00 32.65
ATOM   20827  OH2 WAT   3897      2.547    4.374   39.181   1.00 30.86
ATOM   20828  OH2 WAT   3898     15.775  -19.780   -5.586   1.00 40.14
ATOM   20829  OH2 WAT   3899     25.581  -38.670   36.519   1.00 28.00
ATOM   20830  OH2 WAT   3900     -5.538  -11.112    0.952   1.00 35.04
ATOM   20831  OH2 WAT   3901     22.835   -4.612   16.494   1.00 29.12
ATOM   20832  OH2 WAT   3902     12.797   17.517   28.765   1.00 25.18
ATOM   20833  OH2 WAT   3903      4.058  -26.546    4.576   1.00 30.15
ATOM   20834  OH2 WAT   3904     29.516   -1.506   18.412   1.00 35.13
ATOM   20835  OH2 WAT   3905      8.641  -41.868   14.364   1.00 24.18
ATOM   20836  OH2 WAT   3906     17.066   16.097   14.366   1.00 23.39
ATOM   20837  OH2 WAT   3907     24.988   -0.851  -20.057   1.00 29.57
ATOM   20838  OH2 WAT   3908     -5.479  -33.973   28.883   1.00 27.02
ATOM   20839  OH2 WAT   3909    -35.530  -14.033   12.897   1.00 34.50
ATOM   20840  OH2 WAT   3910    -19.863   23.952   46.624   1.00 32.52
ATOM   20841  OH2 WAT   3911     11.250  -32.899   13.772   1.00 26.39
ATOM   20842  OH2 WAT   3912     18.533   26.176   31.373   1.00 26.30
ATOM   20843  OH2 WAT   3913     11.461  -44.385   34.329   1.00 36.66
ATOM   20844  OH2 WAT   3914     49.046    8.099   27.030   1.00 31.36
ATOM   20845  OH2 WAT   3915     -6.962   47.797   20.546   1.00 35.11
ATOM   20846  OH2 WAT   3916    -11.454   27.697   39.038   1.00 34.68
ATOM   20847  OH2 WAT   3917    -17.534   -6.063  -15.347   1.00 33.23
ATOM   20848  OH2 WAT   3918    -20.662   24.797   51.285   1.00 38.11
ATOM   20849  OH2 WAT   3919    -15.182   22.940   -8.359   1.00 32.06
ATOM   20850  OH2 WAT   3920     -5.318   20.153  -21.024   1.00 36.60
ATOM   20851  OH2 WAT   3921     29.287   32.027   23.219   1.00 29.21
ATOM   20852  OH2 WAT   3922      5.296    4.996   60.230   1.00 27.47
ATOM   20853  OH2 WAT   3923      0.917  -45.819   34.364   1.00 33.20
ATOM   20854  OH2 WAT   3924      3.488    6.382   55.858   1.00 25.52
ATOM   20855  OH2 WAT   3925     32.958    6.677   47.699   1.00 22.12
ATOM   20856  OH2 WAT   3926    -23.321  -11.254   27.790   1.00 35.27
ATOM   20857  OH2 WAT   3927     32.860   27.703   46.551   1.00 32.44
ATOM   20858  OH2 WAT   3928     -1.426   25.054   11.614   1.00 29.69
ATOM   20859  OH2 WAT   3929    -15.519   16.582   14.184   1.00 28.11
ATOM   20860  OH2 WAT   3930     43.595  -17.787    8.451   1.00 30.25
ATOM   20861  OH2 WAT   3931     23.063    6.691   36.902   1.00 33.20
ATOM   20862  OH2 WAT   3932     -9.032    1.177   27.078   1.00 34.25
ATOM   20863  OH2 WAT   3933     31.257   21.599    1.621   1.00 37.72
ATOM   20864  OH2 WAT   3934     38.507  -21.072  -10.854   1.00 25.61
ATOM   20865  OH2 WAT   3935    -23.025   12.738  -10.126   1.00 28.93
ATOM   20866  OH2 WAT   3936     22.699  -11.887   36.490   1.00 24.74
ATOM   20867  OH2 WAT   3937     17.275   -3.978   40.410   1.00 32.51
ATOM   20868  OH2 WAT   3938      7.861   15.365   34.973   1.00 44.23
ATOM   20869  OH2 WAT   3939     11.275   25.692   34.511   1.00 32.64
ATOM   20870  OH2 WAT   3940     -3.313  -38.226   29.667   1.00 33.46
ATOM   20871  OH2 WAT   3941     -7.692  -42.437   29.109   1.00 43.80
ATOM   20872  OH2 WAT   3942    -13.863   31.441   25.663   1.00 37.38
ATOM   20873  OH2 WAT   3943    -12.474  -21.794   42.793   1.00 34.53
ATOM   20874  OH2 WAT   3944     -3.638   41.102   62.525   1.00 37.56
ATOM   20875  OH2 WAT   3945    -18.227   25.816   55.937   1.00 30.59
ATOM   20876  OH2 WAT   3946    -15.985  -38.554   28.518   1.00 32.77
ATOM   20877  OH2 WAT   3947     34.669  -24.614   67.209   1.00 25.76
ATOM   20878  OH2 WAT   3948     54.577   15.128   52.543   1.00 33.52
ATOM   20879  OH2 WAT   3949      0.887  -14.120    4.073   1.00 36.74
ATOM   20880  OH2 WAT   3950    -15.097   35.053   18.039   1.00 37.02
ATOM   20881  OH2 WAT   3951     15.818    2.198    9.301   1.00 29.29
ATOM   20882  OH2 WAT   3952    -22.631    7.920  -14.709   1.00 23.92
ATOM   20883  OH2 WAT   3953      1.132  -17.635   32.905   1.00 29.71
ATOM   20884  OH2 WAT   3954    -24.033  -11.665   68.949   1.00 36.66
ATOM   20885  OH2 WAT   3955     31.947  -26.774   44.122   1.00 27.95
ATOM   20886  OH2 WAT   3956     27.559  -23.512   73.698   1.00 34.23
ATOM   20887  OH2 WAT   3957     40.516   20.972   40.033   1.00 37.10
ATOM   20888  OH2 WAT   3958    -21.789  -38.079   25.502   1.00 23.71
ATOM   20889  OH2 WAT   3959     27.138   35.825   22.971   1.00 29.72
ATOM   20890  OH2 WAT   3960      6.627   13.854   67.881   1.00 33.43
ATOM   20891  OH2 WAT   3961     -7.495   30.319   65.877   1.00 47.88
ATOM   20892  OH2 WAT   3962     39.945  -16.981   59.063   1.00 41.80
ATOM   20893  OH2 WAT   3963     10.451   -0.990   11.902   1.00 42.44
ATOM   20894  OH2 WAT   3964    -19.187   17.170    7.811   1.00 34.07
ATOM   20895  OH2 WAT   3965     55.677    8.381   57.068   1.00 34.33
```

```
ATOM   20896   OH2 WAT   3966     -21.554   13.101    7.475   1.00 24.12
ATOM   20897   OH2 WAT   3967       8.150  -27.034   50.434   1.00 39.84
ATOM   20898   OH2 WAT   3968     -18.831    9.121   46.959   1.00 30.55
ATOM   20899   OH2 WAT   3969      50.680    1.961   15.800   1.00 35.02
ATOM   20900   OH2 WAT   3970      35.217  -49.138   25.289   1.00 34.87
ATOM   20901   OH2 WAT   3971     -29.398   -8.042   11.100   1.00 31.40
ATOM   20902   OH2 WAT   3972      19.447   17.441   13.441   1.00 29.33
ATOM   20903   OH2 WAT   3973     -13.103    5.510   51.486   1.00 32.37
ATOM   20904   OH2 WAT   3974      35.572  -38.920   31.797   1.00 29.21
ATOM   20905   OH2 WAT   3975      42.490   -6.432   48.177   1.00 37.33
ATOM   20906   OH2 WAT   3976      55.908    7.452   19.225   1.00 41.37
ATOM   20907   OH2 WAT   3977     -23.545   12.346  -12.731   1.00 36.65
ATOM   20908   OH2 WAT   3978      29.194  -25.699   42.423   1.00 28.23
ATOM   20909   OH2 WAT   3979      24.546    4.768   33.624   1.00 34.00
ATOM   20910   OH2 WAT   3980      11.846  -56.638   27.547   1.00 36.56
ATOM   20911   OH2 WAT   3981     -11.970  -28.236   68.101   1.00 31.56
ATOM   20912   OH2 WAT   3982      34.680    0.521   51.130   1.00 26.18
ATOM   20913   OH2 WAT   3983      24.960  -27.638   15.617   1.00 35.13
ATOM   20914   OH2 WAT   3984      12.178  -47.174   31.370   1.00 34.11
ATOM   20915   OH2 WAT   3985     -12.298  -29.408   25.980   1.00 20.06
ATOM   20916   OH2 WAT   3986      -5.239   -4.738   26.410   1.00 30.64
ATOM   20917   OH2 WAT   3987       7.222   25.190   72.525   1.00 29.80
ATOM   20918   OH2 WAT   3988      -8.316  -17.085    4.491   1.00 32.12
ATOM   20919   OH2 WAT   3989      14.875  -37.478   62.713   1.00 36.51
ATOM   20920   OH2 WAT   3990      -0.318  -32.480   35.647   1.00 31.85
ATOM   20921   OH2 WAT   3991      26.991    6.700   24.647   1.00 28.93
ATOM   20922   OH2 WAT   3992       9.431  -16.988    4.689   1.00 31.20
ATOM   20923   OH2 WAT   3993      23.751   35.159   59.828   1.00 30.73
ATOM   20924   OH2 WAT   3994     -29.524    4.920   48.463   1.00 38.77
ATOM   20925   OH2 WAT   3995     -10.036   20.469    3.697   1.00 27.33
ATOM   20926   OH2 WAT   3996      13.430  -13.926   30.486   1.00 27.55
ATOM   20927   OH2 WAT   3997     -19.648  -30.155    4.910   1.00 27.29
ATOM   20928   OH2 WAT   3998      -1.861    2.934   16.906   1.00 22.81
ATOM   20929   OH2 WAT   3999      -6.312  -20.345   39.194   1.00 36.98
ATOM   20930   OH2 WAT   4000       0.162   16.385   31.968   1.00 40.85
ATOM   20931   OH2 WAT   4001      37.331  -42.808   29.079   1.00 35.13
ATOM   20932   OH2 WAT   4002       1.728    0.651   41.556   1.00 40.93
ATOM   20933   OH2 WAT   4003       7.955  -18.489   -7.241   1.00 41.83
ATOM   20934   OH2 WAT   4004      -2.324  -24.753   41.326   1.00 36.27
ATOM   20935   OH2 WAT   4005     -14.001  -19.794   -0.066   1.00 34.42
ATOM   20936   OH2 WAT   4006      19.662  -17.365  -18.983   1.00 32.80
ATOM   20937   OH2 WAT   4007      10.564  -14.743  -13.275   1.00 29.84
ATOM   20938   OH2 WAT   4008      15.113   15.031   39.754   1.00 30.34
ATOM   20939   OH2 WAT   4009      35.331  -21.374   20.527   1.00 31.28
ATOM   20940   OH2 WAT   4010      22.819   15.879    3.191   1.00 35.03
ATOM   20941   OH2 WAT   4011     -10.543  -46.147    9.362   1.00 38.45
ATOM   20942   OH2 WAT   4012     -16.594   34.561   56.964   1.00 28.81
ATOM   20943   OH2 WAT   4013     -10.146   32.295   63.758   1.00 37.29
ATOM   20944   OH2 WAT   4014      48.882   -7.382   51.071   1.00 37.37
ATOM   20945   OH2 WAT   4015      29.920    7.293   29.541   1.00 33.85
ATOM   20946   OH2 WAT   4016      19.625  -12.921   72.073   1.00 36.63
ATOM   20947   OH2 WAT   4017      13.368  -34.511   37.285   1.00 29.54
ATOM   20948   OH2 WAT   4018      -5.762   -7.177   29.837   1.00 31.23
ATOM   20949   OH2 WAT   4019      11.378  -38.956   13.198   1.00 31.14
ATOM   20950   OH2 WAT   4020      -7.090  -14.815   72.040   1.00 26.77
ATOM   20951   OH2 WAT   4021       2.252   22.804   -7.049   1.00 32.91
ATOM   20952   OH2 WAT   4022      -3.449   14.552  -24.093   1.00 36.29
ATOM   20953   OH2 WAT   4023      -8.112    3.142  -24.672   1.00 33.84
ATOM   20954   OH2 WAT   4024      18.026  -21.806    8.212   1.00 29.93
ATOM   20955   OH2 WAT   4025      60.020   17.539   13.000   1.00 44.67
ATOM   20956   OH2 WAT   4026     -26.370  -39.869   16.104   1.00 41.85
ATOM   20957   OH2 WAT   4027      16.764   19.360   52.609   1.00 28.33
ATOM   20958   OH2 WAT   4028      35.990   24.016   40.511   1.00 34.74
ATOM   20959   OH2 WAT   4029      57.458   10.198   50.817   1.00 32.75
ATOM   20960   OH2 WAT   4030       1.804  -47.829   30.519   1.00 26.50
ATOM   20961   OH2 WAT   4031     -10.626   -9.725   72.521   1.00 38.53
ATOM   20962   OH2 WAT   4032      43.991  -27.164   51.358   1.00 25.47
ATOM   20963   OH2 WAT   4033     -28.328  -39.519   17.822   1.00 37.78
ATOM   20964   OH2 WAT   4034     -29.987  -22.766    8.334   1.00 31.96
ATOM   20965   OH2 WAT   4035       2.256   13.057  -20.781   1.00 40.03
ATOM   20966   OH2 WAT   4036      25.989  -20.630  -14.613   1.00 32.18
ATOM   20967   OH2 WAT   4037       2.215  -18.558   69.068   1.00 34.21
ATOM   20968   OH2 WAT   4038     -36.511  -18.857   14.921   1.00 29.01
ATOM   20969   OH2 WAT   4039       2.072   25.410   67.667   1.00 25.96
ATOM   20970   OH2 WAT   4040      -4.117  -40.064   35.025   1.00 27.36
ATOM   20971   OH2 WAT   4041       3.196   26.403   17.608   1.00 32.65
ATOM   20972   OH2 WAT   4042       4.213  -11.022   21.040   1.00 25.61
```

```
ATOM   20973  OH2 WAT  4043      20.672    6.288   43.154  1.00 11.39
ATOM   20974  OH2 WAT  4044      24.230   13.675   24.481  1.00 17.87
ATOM   20975  OH2 WAT  4045      11.491  -12.039   39.730  1.00 16.52
ATOM   20976  OH2 WAT  4046      -2.958  -45.541   12.487  1.00 25.04
ATOM   20977  OH2 WAT  4047      21.124    0.639   54.913  1.00 19.00
ATOM   20978  OH2 WAT  4048      10.830  -15.313   20.740  1.00 17.94
ATOM   20979  OH2 WAT  4049       7.082    3.993   47.118  1.00 22.59
ATOM   20980  OH2 WAT  4050     -15.003   20.551  -11.225  1.00 23.46
ATOM   20981  OH2 WAT  4051       5.614   -3.781   42.911  1.00 18.68
ATOM   20982  OH2 WAT  4052       2.878   -5.383   14.276  1.00 21.86
ATOM   20983  OH2 WAT  4053     -28.975    0.173   43.415  1.00 25.48
ATOM   20984  OH2 WAT  4054      18.990   13.786   23.082  1.00 34.23
ATOM   20985  OH2 WAT  4055      14.863   15.999   12.872  1.00 22.69
ATOM   20986  OH2 WAT  4056       4.404  -26.590   36.835  1.00 20.51
ATOM   20987  OH2 WAT  4057      16.881   17.463   50.738  1.00 25.65
ATOM   20988  OH2 WAT  4058       7.759  -15.429   23.245  1.00 25.72
ATOM   20989  OH2 WAT  4059       1.948   -8.274   37.874  1.00 24.67
ATOM   20990  OH2 WAT  4060      -0.846    5.377   57.566  1.00 26.92
ATOM   20991  OH2 WAT  4061      11.838  -16.631   28.299  1.00 26.60
ATOM   20992  OH2 WAT  4062       8.670   -7.127    7.982  1.00 23.89
ATOM   20993  OH2 WAT  4063       7.943    4.878   13.325  1.00 29.72
ATOM   20994  OH2 WAT  4064      -7.873  -18.149   38.159  1.00 24.67
ATOM   20995  OH2 WAT  4065      19.946  -16.578   22.471  1.00 21.68
ATOM   20996  OH2 WAT  4066      26.755  -23.578   42.730  1.00 30.96
ATOM   20997  OH2 WAT  4067      19.813  -21.428   77.332  1.00 26.96
ATOM   20998  OH2 WAT  4068     -14.611  -27.813   24.596  1.00 22.85
ATOM   20999  OH2 WAT  4069      10.556  -42.741   36.183  1.00 30.39
ATOM   21000  OH2 WAT  4070       9.656   11.940   15.495  1.00 33.39
ATOM   21001  OH2 WAT  4071      15.586   -6.472   42.294  1.00 26.75
ATOM   21002  OH2 WAT  4072      21.817   15.587   28.120  1.00 36.02
ATOM   21003  OH2 WAT  4073      42.955  -29.610   52.935  1.00 30.64
ATOM   21004  OH2 WAT  4074      -5.163  -46.625    9.621  1.00 25.65
ATOM   21005  OH2 WAT  4075     -22.661  -39.337   16.988  1.00 29.68
ATOM   21006  OH2 WAT  4076      12.558   54.160   17.405  1.00 42.52
ATOM   21007  OH2 WAT  4077      14.558  -21.050   -8.217  1.00 35.25
ATOM   21008  OH2 WAT  4078      14.627  -21.292   77.322  1.00 26.15
ATOM   21009  OH2 WAT  4079      38.511   12.796   27.817  1.00 32.17
ATOM   21010  OH2 WAT  4080       6.634  -11.234   41.030  1.00 33.51
ATOM   21011  OH2 WAT  4081      19.800    4.002   -7.345  1.00 31.84
ATOM   21012  OH2 WAT  4082     -11.712   14.246  -16.297  1.00 37.20
ATOM   21013  OH2 WAT  4083      -1.181   12.792  -23.740  1.00 27.77
ATOM   21014  OH2 WAT  4084     -13.478   31.890   22.898  1.00 35.63
ATOM   21015  OH2 WAT  4085     -26.720   -9.960   27.431  1.00 31.59
ATOM   21016  OH2 WAT  4086      21.413  -27.440   21.028  1.00 46.92
ATOM   21017  OH2 WAT  4087      21.955  -19.353  -18.425  1.00 22.71
ATOM   21018  OH2 WAT  4088      12.468   -6.264   66.043  1.00 33.46
ATOM   21019  OH2 WAT  4089      13.249  -36.608   12.813  1.00 30.40
ATOM   21020  OH2 WAT  4090      31.960   -4.177   33.906  1.00 33.61
ATOM   21021  OH2 WAT  4091       7.583  -54.047   28.356  1.00 26.52
ATOM   21022  OH2 WAT  4092       0.614   21.888   44.748  1.00 35.94
ATOM   21023  OH2 WAT  4093      37.538   -5.989   37.641  1.00 32.64
ATOM   21024  OH2 WAT  4094      21.638    5.075   39.740  1.00 17.05
ATOM   21025  OH2 WAT  4095      28.273  -46.828   32.920  1.00 24.39
ATOM   21026  OH2 WAT  4096      11.835  -19.653    5.133  1.00 25.49
ATOM   21027  OH2 WAT  4097     -13.207  -44.364    8.973  1.00 37.09
ATOM   21028  OH2 WAT  4098      27.647   11.322    5.334  1.00 32.90
ATOM   21029  OH2 WAT  4099      10.259  -49.393    8.411  1.00 26.63
ATOM   21030  OH2 WAT  4100       4.110  -39.224   10.206  1.00 32.32
ATOM   21031  OH2 WAT  4101      23.743  -40.087   37.856  1.00 50.14
ATOM   21032  OH2 WAT  4102     -24.342   -7.153   30.038  1.00 30.58
ATOM   21033  OH2 WAT  4103      -0.619   11.724  -26.102  1.00 35.65
ATOM   21034  OH2 WAT  4104      -9.425   29.111   31.719  1.00 37.15
ATOM   21035  OH2 WAT  4105      32.807  -16.675   32.368  1.00 36.40
ATOM   21036  OH2 WAT  4106      14.318   14.720    0.095  1.00 27.76
ATOM   21037  OH2 WAT  4107      46.641  -18.008    5.068  1.00 28.99
ATOM   21038  OH2 WAT  4108      40.504  -35.415   30.077  1.00 30.68
ATOM   21039  OH2 WAT  4109     -21.465    1.072   -0.752  1.00 33.32
ATOM   21040  OH2 WAT  4110      46.498   -3.634   42.684  1.00 31.74
ATOM   21041  OH2 WAT  4111      18.777  -56.294   21.233  1.00 25.38
ATOM   21042  OH2 WAT  4112       4.896  -54.443   22.412  1.00 30.18
ATOM   21043  OH2 WAT  4113      -6.278  -12.430    3.805  1.00 29.79
ATOM   21044  OH2 WAT  4114      31.595  -33.290   16.444  1.00 31.75
ATOM   21045  OH2 WAT  4115      26.923   26.631   13.935  1.00 33.99
ATOM   21046  OH2 WAT  4116     -29.043    5.487   -7.898  1.00 45.43
ATOM   21047  OH2 WAT  4117     -16.588  -19.270   41.769  1.00 31.95
ATOM   21048  OH2 WAT  4118       6.070    9.092   39.715  1.00 30.14
ATOM   21049  OH2 WAT  4119      -3.516  -31.633   64.053  1.00 45.65
```

```
ATOM   21050  OH2 WAT  4120     52.126  -3.822  53.340  1.00 45.42
ATOM   21051  OH2 WAT  4121     46.817  -4.484 -14.025  1.00 46.99
ATOM   21052  OH2 WAT  4122    -12.592   3.190  66.991  1.00 35.76
ATOM   21053  OH2 WAT  4123      3.350  29.034  35.859  1.00 34.34
ATOM   21054  OH2 WAT  4124      0.606 -33.642  55.873  1.00 32.91
ATOM   21055  OH2 WAT  4125    -14.891  36.065  20.896  1.00 37.79
ATOM   21056  OH2 WAT  4126    -25.092   9.956  50.529  1.00 32.04
ATOM   21057  OH2 WAT  4127     24.645   3.578  21.558  1.00 33.84
ATOM   21058  OH2 WAT  4128     14.966 -15.407  27.047  1.00 37.48
ATOM   21059  OH2 WAT  4129     25.311   0.590  59.424  1.00 32.26
ATOM   21060  OH2 WAT  4130      5.921   2.186  48.638  1.00 28.21
ATOM   21061  OH2 WAT  4131     -0.194 -33.527   6.693  1.00 29.78
ATOM   21062  OH2 WAT  4132     -9.038  35.946  43.790  1.00 37.55
ATOM   21063  OH2 WAT  4133     17.435 -31.315  16.469  1.00 31.72
ATOM   21064  OH2 WAT  4134     30.359   5.569  52.711  1.00 23.92
ATOM   21065  OH2 WAT  4135      3.683 -12.556  17.583  1.00 19.93
ATOM   21066  OH2 WAT  4136     19.428 -23.653  47.102  1.00 24.33
ATOM   21067  OH2 WAT  4137      4.278  27.765  15.197  1.00 31.50
ATOM   21068  OH2 WAT  4138      6.578 -15.894  41.477  1.00 20.38
ATOM   21069  OH2 WAT  4139     28.301  -2.532  -0.522  1.00 24.30
ATOM   21070  OH2 WAT  4140     37.632 -34.367  20.394  1.00 26.22
ATOM   21071  OH2 WAT  4141    -17.982  10.709  12.655  1.00 28.44
ATOM   21072  OH2 WAT  4142     14.342 -13.857  17.205  1.00 25.59
ATOM   21073  OH2 WAT  4143      1.448 -15.812  37.733  1.00 25.27
ATOM   21074  OH2 WAT  4144     17.870 -19.299   7.566  1.00 26.09
ATOM   21075  OH2 WAT  4145      9.956 -49.449  29.174  1.00 28.96
ATOM   21076  OH2 WAT  4146     17.480   3.336  10.956  1.00 30.39
ATOM   21077  OH2 WAT  4147      8.517  -4.567   9.940  1.00 31.22
ATOM   21078  OH2 WAT  4148     -7.175   0.887  19.891  1.00 27.12
ATOM   21079  OH2 WAT  4149     28.989  41.203  15.263  1.00 29.63
ATOM   21080  OH2 WAT  4150     23.580   3.660  40.283  1.00 39.46
ATOM   21081  OH2 WAT  4151     13.879  13.838  16.264  1.00 28.18
ATOM   21082  OH2 WAT  4152      3.363 -53.015  26.505  1.00 26.41
ATOM   21083  OH2 WAT  4153     41.742 -31.794  51.912  1.00 29.88
ATOM   21084  OH2 WAT  4154     15.462  21.257  30.971  1.00 33.63
ATOM   21085  OH2 WAT  4155     13.429 -11.032  37.773  1.00 32.69
ATOM   21086  OH2 WAT  4156      4.765  -2.386  40.740  1.00 35.83
ATOM   21087  OH2 WAT  4157     19.023 -19.667  75.203  1.00 37.72
ATOM   21088  OH2 WAT  4158     19.034 -11.102  19.527  1.00 33.73
ATOM   21089  OH2 WAT  4159     -1.263  16.009  20.936  1.00 27.24
ATOM   21090  OH2 WAT  4160     -6.256 -45.054   6.939  1.00 41.51
ATOM   21091  OH2 WAT  4161     15.761 -28.451  54.807  1.00 36.09
ATOM   21092  OH2 WAT  4162     18.439  14.295  19.227  1.00 38.49
ATOM   21093  OH2 WAT  4163     -3.972 -20.387  37.814  1.00 31.16
ATOM   21094  OH2 WAT  4164     18.013  -1.645  54.687  1.00 30.47
ATOM   21095  OH2 WAT  4165    -15.633  33.909  22.604  1.00 31.22
ATOM   21096  OH2 WAT  4166     40.780  -8.375  40.145  1.00 32.51
ATOM   21097  OH2 WAT  4167     47.802  30.040   7.228  1.00 40.79
ATOM   21098  OH2 WAT  4168     -3.032 -32.860  34.864  1.00 27.66
ATOM   21099  OH2 WAT  4169      9.198  20.743  72.320  1.00 35.07
ATOM   21100  OH2 WAT  4170     11.975 -21.527   2.995  1.00 36.62
ATOM   21101  OH2 WAT  4171    -30.445  -6.086  44.089  1.00 34.70
ATOM   21102  OH2 WAT  4172     -5.261 -11.466  53.111  1.00 44.39
ATOM   21103  OH2 WAT  4173    -14.399 -20.387  40.817  1.00 30.20
ATOM   21104  OH2 WAT  4174    -10.618 -14.092   4.622  1.00 31.64
ATOM   21105  OH2 WAT  4175     14.591 -19.755   5.914  1.00 37.61
ATOM   21106  OH2 WAT  4176     19.353 -22.226   0.817  1.00 32.55
ATOM   21107  OH2 WAT  4177    -29.776  -5.355  39.885  1.00 30.32
ATOM   21108  OH2 WAT  4178     10.534 -13.068 -20.889  1.00 35.70
ATOM   21109  OH2 WAT  4179     -8.062   5.216  33.169  1.00 25.98
ATOM   21110  OH2 WAT  4180     -2.522  30.394  63.742  1.00 28.47
ATOM   21111  OH2 WAT  4181     46.009   3.328  33.070  1.00 35.13
ATOM   21112  OH2 WAT  4182      8.360   8.234  41.757  1.00 29.18
ATOM   21113  OH2 WAT  4183     42.814 -18.598  55.686  1.00 37.99
ATOM   21114  OH2 WAT  4184    -16.001  22.656  38.987  1.00 29.36
ATOM   21115  OH2 WAT  4185     10.259 -36.135  10.535  1.00 37.88
ATOM   21116  OH2 WAT  4186    -15.684  -9.143  -8.092  1.00 31.91
ATOM   21117  OH2 WAT  4187     -1.090   1.204  14.459  1.00 30.11
ATOM   21118  OH2 WAT  4188     44.289   2.682  29.166  1.00 28.69
ATOM   21119  OH2 WAT  4189     -0.552 -28.362  46.000  1.00 28.10
ATOM   21120  OH2 WAT  4190     13.135  -5.781  41.932  1.00 35.53
ATOM   21121  OH2 WAT  4191     19.734  30.686  49.844  1.00 35.70
ATOM   21122  OH2 WAT  4192    -36.378 -21.364  23.565  1.00 35.60
ATOM   21123  OH2 WAT  4193     17.251   0.350  12.314  1.00 23.98
ATOM   21124  OH2 WAT  4194    -10.271 -38.090  23.438  1.00 32.22
ATOM   21125  OH2 WAT  4195    -22.687   7.954   3.699  1.00 33.28
ATOM   21126  OH2 WAT  4196    -21.951  15.459   4.933  1.00 31.65
```

```
ATOM   21127  OH2 WAT   4197   -17.403   21.503   -8.388  1.00 32.40
ATOM   21128  OH2 WAT   4198    21.977    9.231   37.108  1.00 32.87
ATOM   21129  OH2 WAT   4199    37.419   17.868   21.884  1.00 46.31
ATOM   21130  OH2 WAT   4200    22.196    9.629   18.773  1.00 31.77
ATOM   21131  OH2 WAT   4201    16.692  -23.322   -5.245  1.00 36.91
ATOM   21132  OH2 WAT   4202    42.777  -33.719   53.939  1.00 35.86
ATOM   21133  OH2 WAT   4203     1.354   -2.239   14.757  1.00 37.10
ATOM   21134  OH2 WAT   4204   -26.952   -3.544   38.440  1.00 33.73
ATOM   21135  OH2 WAT   4205    29.239   -5.609   38.042  1.00 29.97
ATOM   21136  OH2 WAT   4206    43.138    0.368   25.089  1.00 32.24
ATOM   21137  OH2 WAT   4207    52.415   -7.788   51.945  1.00 30.80
ATOM   21138  OH2 WAT   4208    -2.220    0.196   40.301  1.00 41.13
ATOM   21139  OH2 WAT   4209     9.166  -36.364    8.279  1.00 32.28
ATOM   21140  OH2 WAT   4210    37.549  -23.883   19.085  1.00 35.85
ATOM   21141  OH2 WAT   4211    40.366  -43.408   18.178  1.00 35.18
ATOM   21142  OH2 WAT   4212    41.259  -39.426   17.720  1.00 35.03
ATOM   21143  OH2 WAT   4213     5.966  -16.794   26.485  1.00 33.99
ATOM   21144  OH2 WAT   4214    -0.504   24.436   38.709  1.00 31.34
ATOM   21145  OH2 WAT   4215   -31.816   -7.311   63.265  1.00 46.67
ATOM   21146  OH2 WAT   4216    31.602  -27.488   41.591  1.00 32.87
ATOM   21147  OH2 WAT   4217    22.491    8.396   33.548  1.00 37.01
ATOM   21148  OH2 WAT   4218     8.588   14.998   -7.928  1.00 34.59
ATOM   21149  OH2 WAT   4219    -5.071   39.648   64.146  1.00 36.17
ATOM   21150  OH2 WAT   4220    30.649    7.956   54.006  1.00 28.56
ATOM   21151  OH2 WAT   4221   -25.150    4.421   48.986  1.00 31.32
ATOM   21152  OH2 WAT   4222     4.603  -15.946   39.930  1.00 28.11
ATOM   21153  OH2 WAT   4223   -19.155   22.017   52.855  1.00 36.51
ATOM   21154  OH2 WAT   4224    -1.225   27.223   40.496  1.00 34.03
ATOM   21155  OH2 WAT   4225     9.323   -6.838   44.620  1.00 32.56
ATOM   21156  OH2 WAT   4226   -13.348  -40.907   25.217  1.00 36.02
ATOM   21157  OH2 WAT   4227   -29.811  -16.829   55.472  1.00 40.39
ATOM   21158  OH2 WAT   4228     1.208   13.403  -12.804  1.00 25.50
ATOM   21159  OH2 WAT   4229    31.515   42.188   14.797  1.00 36.19
ATOM   21160  OH2 WAT   4230   -22.435  -40.140    8.269  1.00 32.85
ATOM   21161  OH2 WAT   4231     4.884   -8.621   38.037  1.00 29.97
ATOM   21162  OH2 WAT   4232    41.136  -12.337   43.000  1.00 34.40
ATOM   21163  OH2 WAT   4233    22.346   33.851   68.574  1.00 47.30
ATOM   21164  OH2 WAT   4234     6.737    5.652   40.043  1.00 42.41
ATOM   21165  OH2 WAT   4235     5.196  -13.093   37.173  1.00 33.25
ATOM   21166  OH2 WAT   4236     5.818   -1.680   14.657  1.00 40.01
ATOM   21167  OH2 WAT   4237    -5.653  -17.045    3.161  1.00 38.26
ATOM   21168  OH2 WAT   4238   -22.623    5.252   41.872  1.00 32.25
ATOM   21169  OH2 WAT   4239   -13.321  -28.124   62.372  1.00 31.95
ATOM   21170  OH2 WAT   4240   -22.968   -6.416   35.146  1.00 22.64
ATOM   21171  OH2 WAT   4241   -27.579  -29.214   23.224  1.00 28.40
ATOM   21172  OH2 WAT   4242   -17.589   -1.229   71.448  1.00 40.90
ATOM   21173  OH2 WAT   4243    -1.591  -26.804    3.938  1.00 30.62
ATOM   21174  OH2 WAT   4244    11.074  -44.495   29.557  1.00 40.76
ATOM   21175  OH2 WAT   4245    -4.840   12.652   24.363  1.00 35.77
ATOM   21176  OH2 WAT   4246    47.599   -6.430   55.516  1.00 36.89
ATOM   21177  OH2 WAT   4247   -28.043    2.899   -0.586  1.00 42.68
ATOM   21178  OH2 WAT   4248    39.767  -37.649   16.094  1.00 42.67
ATOM   21179  OH2 WAT   4249    22.684   29.859    5.493  1.00 39.59
ATOM   21180  OH2 WAT   4250    -8.757   40.956    1.091  1.00 32.81
ATOM   21181  OH2 WAT   4251    40.067  -45.503   20.265  1.00 35.71
ATOM   21182  OH2 WAT   4252    26.027    1.180   40.411  1.00 31.92
ATOM   21183  OH2 WAT   4253    17.254  -13.580   32.677  1.00 37.95
ATOM   21184  OH2 WAT   4254    38.172   16.681   33.750  1.00 36.90
ATOM   21185  OH2 WAT   4255   -23.882   11.970    4.626  1.00 35.75
ATOM   21186  OH2 WAT   4256    24.484   29.594   17.149  1.00 36.63
ATOM   21187  OH2 WAT   4257    14.330   14.056   -7.663  1.00 32.35
ATOM   21188  OH2 WAT   4258     9.933  -26.844   55.259  1.00 34.01
ATOM   21189  OH2 WAT   4259    12.646   -9.356  -24.468  1.00 43.12
ATOM   21190  OH2 WAT   4260    40.273   -5.490    1.123  1.00 31.20
ATOM   21191  OH2 WAT   4261    17.384   -0.963   15.304  1.00 40.38
ATOM   21192  OH2 WAT   4262     7.357    1.338   55.482  1.00 34.09
ATOM   21193  OH2 WAT   4263    -7.701   28.368   40.512  1.00 31.74
ATOM   21194  OH2 WAT   4264     6.424   28.970   12.284  1.00 35.75
ATOM   21195  OH2 WAT   4265    28.293   -7.969   59.997  1.00 37.02
ATOM   21196  OH2 WAT   4266    33.471  -50.990   21.231  1.00 34.39
ATOM   21197  OH2 WAT   4267    36.422    1.406   67.198  1.00 37.21
ATOM   21198  OH2 WAT   4268     4.155   15.109   20.451  1.00 40.58
ATOM   21199  OH2 WAT   4269   -26.153   -3.024   -4.695  1.00 24.77
ATOM   21200  OH2 WAT   4270    30.499  -25.454   72.705  1.00 38.88
ATOM   21201  OH2 WAT   4271     4.763   51.788    4.914  1.00 27.90
ATOM   21202  OH2 WAT   4272   -11.498   46.346   14.162  1.00 32.61
ATOM   21203  OH2 WAT   4273    39.036  -19.110   16.994  1.00 32.98
```

```
ATOM   21204  OH2 WAT   4274     -6.998   36.928   26.870  1.00 43.35
ATOM   21205  OH2 WAT   4275     46.948    7.501   34.599  1.00 24.81
ATOM   21206  OH2 WAT   4276     50.983   -8.055   -5.708  1.00 40.55
ATOM   21207  OH2 WAT   4277     19.452  -39.708   61.023  1.00 34.30
ATOM   21208  OH2 WAT   4278      7.397  -30.621   39.404  1.00 33.65
ATOM   21209  OH2 WAT   4279     13.876   -1.133   12.109  1.00 41.50
ATOM   21210  OH2 WAT   4280     -0.160   20.020   -0.572  1.00 32.16
ATOM   21211  OH2 WAT   4281     45.793  -19.678   50.360  1.00 35.75
ATOM   21212  OH2 WAT   4282     47.155   27.281   14.452  1.00 38.21
ATOM   21213  OH2 WAT   4283      8.531  -12.525   69.846  1.00 42.83
ATOM   21214  OH2 WAT   4284     38.230   21.846   69.235  1.00 34.37
ATOM   21215  OH2 WAT   4285     49.714  -15.553    2.722  1.00 31.07
ATOM   21216  OH2 WAT   4286      8.106   30.082   54.050  1.00 33.73
ATOM   21217  OH2 WAT   4287     23.244   32.218   50.889  1.00 33.29
ATOM   21218  OH2 WAT   4288     17.581   21.404   35.067  1.00 43.77
ATOM   21219  OH2 WAT   4289     19.334    9.501   37.368  1.00 34.18
ATOM   21220  OH2 WAT   4290    -32.573  -19.162   54.321  1.00 42.08
ATOM   21221  OH2 WAT   4291     36.584  -48.023   13.443  1.00 37.99
ATOM   21222  OH2 WAT   4292     53.608    2.609   45.918  1.00 29.33
ATOM   21223  OH2 WAT   4293    -28.355   -3.724   11.537  1.00 36.13
ATOM   21224  OH2 WAT   4294     29.801   34.256   66.452  1.00 42.75
ATOM   21225  OH2 WAT   4295     37.391   14.555   21.327  1.00 29.90
ATOM   21226  OH2 WAT   4296     -0.961   22.126   13.597  1.00 30.11
ATOM   21227  OH2 WAT   4297     31.707    0.427  -19.155  1.00 40.22
ATOM   21228  OH2 WAT   4298     31.457  -20.855  -17.283  1.00 37.42
ATOM   21229  OH2 WAT   4299     25.101  -17.682  -14.424  1.00 32.68
ATOM   21230  OH2 WAT   4300     20.756    8.915   -7.538  1.00 38.06
ATOM   21231  OH2 WAT   4301      8.289  -46.227   33.339  1.00 36.23
ATOM   21232  OH2 WAT   4302    -30.592   -2.404   23.454  1.00 36.26
ATOM   21233  OH2 WAT   4303     -0.554   12.427  -16.863  1.00 29.01
ATOM   21234  OH2 WAT   4304     30.322  -21.630  -20.939  1.00 33.55
ATOM   21235  OH2 WAT   4305    -15.891   14.303   49.053  1.00 41.02
ATOM   21236  OH2 WAT   4306     -5.861  -24.996   39.922  1.00 37.54
ATOM   21237  OH2 WAT   4307    -18.592    5.594   59.709  1.00 44.08
ATOM   21238  OH2 WAT   4308    -13.782  -29.666    2.092  1.00 36.94
ATOM   21239  OH2 WAT   4309     -0.006   10.614   60.001  1.00 43.52
ATOM   21240  OH2 WAT   4310     32.762   -9.491  -23.904  1.00 33.22
ATOM   21241  OH2 WAT   4311     38.244   -3.752    7.396  1.00 36.21
ATOM   21242  OH2 WAT   4312     46.881  -21.498   -8.257  1.00 46.78
ATOM   21243  OH2 WAT   4313     29.381  -44.133   36.141  1.00 38.69
ATOM   21244  OH2 WAT   4314     44.697   -1.657   57.305  1.00 27.49
ATOM   21245  OH2 WAT   4315      3.764  -16.191   73.425  1.00 46.00
ATOM   21246  OH2 WAT   4316      1.552    2.561   15.840  1.00 39.61
ATOM   21247  OH2 WAT   4317     22.489   10.399   26.199  1.00 41.03
ATOM   21248  OH2 WAT   4318    -28.455   -3.493   20.182  1.00 29.54
ATOM   21249  OH2 WAT   4319     22.485  -54.018   16.709  1.00 30.01
ATOM   21250  OH2 WAT   4320     17.660  -27.711   52.097  1.00 38.58
ATOM   21251  OH2 WAT   4321     56.912   13.287   51.121  1.00 44.62
ATOM   21252  OH2 WAT   4322    -21.611  -37.255    5.058  1.00 25.63
ATOM   21253  OH2 WAT   4323     36.941   -3.556   52.524  1.00 35.09
ATOM   21254  OH2 WAT   4324     13.800    6.771  -21.931  1.00 38.56
ATOM   21255  OH2 WAT   4325    -30.772  -37.278   18.011  1.00 47.52
ATOM   21256  OH2 WAT   4326    -31.800  -32.961   17.765  1.00 43.84
ATOM   21257  OH2 WAT   4327     42.719   27.673   55.936  1.00 44.26
ATOM   21258  OH2 WAT   4328     45.545   11.091   29.384  1.00 35.10
ATOM   21259  OH2 WAT   4329     25.956  -50.998   23.510  1.00 34.18
ATOM   21260  OH2 WAT   4330     37.100  -20.795   16.046  1.00 44.28
ATOM   21261  OH2 WAT   4331     22.014    2.258  -19.556  1.00 33.51
ATOM   21262  OH2 WAT   4332    -22.317   18.441    5.383  1.00 36.71
ATOM   21263  OH2 WAT   4333    -10.019  -27.346   26.266  1.00 26.18
ATOM   21264  OH2 WAT   4334     -9.502  -49.756   12.668  1.00 45.74
ATOM   21265  OH2 WAT   4335    -20.898  -40.436   24.117  1.00 33.74
ATOM   21266  OH2 WAT   4336    -19.836   21.671  -18.554  1.00 46.45
ATOM   21267  OH2 WAT   4337      1.661   -6.925   34.463  1.00 36.93
ATOM   21268  OH2 WAT   4338     42.933   18.805   72.619  1.00 34.61
ATOM   21269  OH2 WAT   4339     -0.593   -4.255   21.944  1.00 32.00
ATOM   21270  OH2 WAT   4340      6.393   20.185    3.149  1.00 33.81
ATOM   21271  OH2 WAT   4341     15.614   24.362    5.634  1.00 46.42
ATOM   21272  OH2 WAT   4342     11.089   39.084   58.882  1.00 38.94
ATOM   21273  OH2 WAT   4343     30.841  -39.067   34.205  1.00 44.48
ATOM   21274  OH2 WAT   4344     35.060  -10.488   67.360  1.00 46.38
ATOM   21275  OH2 WAT   4345      3.613  -41.917    8.912  1.00 42.89
ATOM   21276  OH2 WAT   4346    -10.943   42.604   43.714  1.00 40.74
ATOM   21277  OH2 WAT   4347     16.343   51.120   19.143  1.00 39.64
ATOM   21278  OH2 WAT   4348      3.496   14.826   36.570  1.00 28.52
ATOM   21279  OH2 WAT   4349     46.266   37.133    2.322  1.00 37.96
ATOM   21280  OH2 WAT   4350    -11.265   42.564   22.557  1.00 35.16
```

```
ATOM  21281  OH2 WAT  4351   -17.123  13.946  41.412  1.00 37.12
ATOM  21282  OH2 WAT  4352   -29.129 -17.466   5.755  1.00 37.27
ATOM  21283  OH2 WAT  4353    31.454 -25.540  69.971  1.00 28.84
ATOM  21284  OH2 WAT  4354    29.447  -7.929 -21.989  1.00 31.86
ATOM  21285  OH2 WAT  4355   -16.353  12.502  47.101  1.00 30.21
ATOM  21286  OH2 WAT  4356    12.706 -13.430  21.716  1.00 35.82
ATOM  21287  OH2 WAT  4357     7.648 -13.329 -10.841  1.00 33.89
ATOM  21288  OH2 WAT  4358    44.573  15.736  67.094  1.00 35.84
ATOM  21289  OH2 WAT  4359   -12.313  23.838  12.610  1.00 35.05
ATOM  21290  OH2 WAT  4360     5.658  11.876 -23.706  1.00 41.15
ATOM  21291  OH2 WAT  4361   -14.272 -30.125  22.863  1.00 24.72
ATOM  21292  OH2 WAT  4362    -5.304 -48.318  25.587  1.00 39.16
ATOM  21293  OH2 WAT  4363    30.700 -35.265  45.218  1.00 38.38
ATOM  21294  OH2 WAT  4364   -28.043 -13.694  45.466  1.00 34.76
ATOM  21295  OH2 WAT  4365    36.395 -45.668  27.357  1.00 32.81
ATOM  21296  OH2 WAT  4366    45.633 -16.075   9.631  1.00 27.97
ATOM  21297  OH2 WAT  4367     5.551   1.705  57.364  1.00 37.70
ATOM  21298  OH2 WAT  4368     4.335  33.487  73.208  1.00 34.45
ATOM  21299  OH2 WAT  4369   -16.577  -5.490 -18.466  1.00 39.46
ATOM  21300  OH2 WAT  4370    44.958  -2.975  40.294  1.00 41.84
ATOM  21301  OH2 WAT  4371   -11.628  28.838  13.039  1.00 42.95
ATOM  21302  OH2 WAT  4372    40.841  14.763  27.236  1.00 45.00
ATOM  21303  OH2 WAT  4373    10.333  28.827  73.761  1.00 37.30
ATOM  21304  OH2 WAT  4374     1.040  49.430   3.854  1.00 40.14
ATOM  21305  OH2 WAT  4375    16.228   2.460 -24.363  1.00 29.98
ATOM  21306  OH2 WAT  4376   -10.817 -39.207  26.234  1.00 28.48
ATOM  21307  OH2 WAT  4377   -13.169 -26.151  69.385  1.00 42.50
ATOM  21308  OH2 WAT  4378    17.911 -12.633  35.282  1.00 30.10
ATOM  21309  OH2 WAT  4379     9.833 -18.262  -5.406  1.00 33.81
ATOM  21310  OH2 WAT  4380   -23.233  -9.084  34.300  1.00 30.72
ATOM  21311  OH2 WAT  4381    52.131  29.747  28.709  1.00 41.21
ATOM  21312  OH2 WAT  4382     1.375   6.960  58.261  1.00 35.75
ATOM  21313  OH2 WAT  4383   -31.130  -3.570  19.795  1.00 39.36
ATOM  21314  OH2 WAT  4384    37.817   3.006  69.575  1.00 41.33
ATOM  21315  OH2 WAT  4385    -4.563 -16.096   0.551  1.00 37.46
ATOM  21316  OH2 WAT  4386     4.037  -3.919  18.274  1.00 32.56
ATOM  21317  OH2 WAT  4387   -21.141  -1.984  26.707  1.00 33.58
ATOM  21318  OH2 WAT  4388   -22.717   1.730 -11.319  1.00 44.33
ATOM  21319  OH2 WAT  4389    38.993 -41.394  21.353  1.00 26.94
ATOM  21320  OH2 WAT  4390    35.457  -6.585  23.306  1.00 41.41
ATOM  21321  OH2 WAT  4391   -28.515 -11.015  44.907  1.00 44.09
ATOM  21322  OH2 WAT  4392    21.162  12.941  61.076  1.00 33.81
ATOM  21323  OH2 WAT  4393   -15.197   2.825  26.060  1.00 39.04
ATOM  21324  OH2 WAT  4394   -15.450 -25.101  26.034  1.00 25.87
ATOM  21325  OH2 WAT  4395     2.390  19.780  -0.161  1.00 34.76
ATOM  21326  OH2 WAT  4396    43.487 -25.747  59.438  1.00 35.57
ATOM  21327  OH2 WAT  4397    48.629  36.856  21.672  1.00 44.39
ATOM  21328  OH2 WAT  4398    17.100  12.356  40.201  1.00 40.21
ATOM  21329  OH2 WAT  4399     4.507 -10.245 -15.502  1.00 39.12
ATOM  21330  OH2 WAT  4400   -27.080   5.572   0.821  1.00 39.35
ATOM  21331  OH2 WAT  4401    -3.672   0.984  37.698  1.00 39.93
ATOM  21332  OH2 WAT  4402   -20.583  18.697  49.997  1.00 34.01
ATOM  21333  OH2 WAT  4403    39.072 -14.613  58.597  1.00 31.42
ATOM  21334  OH2 WAT  4404    29.709  12.185   3.398  1.00 44.25
ATOM  21335  OH2 WAT  4405    35.880 -22.841  12.910  1.00 33.52
ATOM  21336  OH2 WAT  4406   -35.845 -12.885  22.300  1.00 34.99
ATOM  21337  OH2 WAT  4407    15.319  26.997   5.574  1.00 32.51
ATOM  21338  OH2 WAT  4408     8.333  17.040   3.228  1.00 40.92
ATOM  21339  OH2 WAT  4409   -10.936  26.210  13.895  1.00 37.53
ATOM  21340  OH2 WAT  4410    55.583   6.631  16.381  1.00 45.01
ATOM  21341  OH2 WAT  4411    27.248  -0.852  16.193  1.00 32.03
ATOM  21342  OH2 WAT  4412    11.166 -30.270  54.430  1.00 35.34
ATOM  21343  OH2 WAT  4413    27.193  30.827  45.265  1.00 48.03
ATOM  21344  OH2 WAT  4414     1.816  -4.001  33.376  1.00 38.02
ATOM  21345  OH2 WAT  4415    -7.358   6.238  21.426  1.00 31.68
ATOM  21346  OH2 WAT  4416    23.525  29.907   2.579  1.00 40.00
ATOM  21347  OH2 WAT  4417    19.207   7.060 -17.753  1.00 45.08
ATOM  21348  OH2 WAT  4418    27.504  25.535  33.468  1.00 36.75
ATOM  21349  OH2 WAT  4419     6.892 -32.295  41.776  1.00 41.26
ATOM  21350  OH2 WAT  4420    17.067  -1.474  58.088  1.00 34.61
ATOM  21351  OH2 WAT  4421    22.907  29.267  14.656  1.00 39.78
ATOM  21352  OH2 WAT  4422     6.224 -49.951  10.824  1.00 28.84
ATOM  21353  OH2 WAT  4423   -16.207  35.901  25.434  1.00 40.39
ATOM  21354  OH2 WAT  4424     0.738  15.078  67.744  1.00 35.60
ATOM  21355  OH2 WAT  4425   -22.384   0.170  34.473  1.00 38.76
ATOM  21356  OH2 WAT  4426    52.264  32.015  13.016  1.00 52.37
ATOM  21357  OH2 WAT  4427    28.668 -23.464 -19.783  1.00 40.92
```

```
ATOM   21358   OH2 WAT   4428      29.624   26.370   37.226   1.00 43.83
ATOM   21359   OH2 WAT   4429      17.324  -33.128   69.819   1.00 36.99
ATOM   21360   OH2 WAT   4430      10.556    3.415   13.566   1.00 46.02
ATOM   21361   OH2 WAT   4431       8.523   41.333   58.843   1.00 39.73
ATOM   21362   OH2 WAT   4432      33.167   23.763   37.373   1.00 28.85
ATOM   21363   OH2 WAT   4433      15.195  -18.491  -17.090   1.00 47.32
ATOM   21364   OH2 WAT   4434     -23.836    2.684   36.535   1.00 38.09
ATOM   21365   OH2 WAT   4435      19.214   12.147   -5.475   1.00 35.97
ATOM   21366   OH2 WAT   4436      27.162   -7.740   67.562   1.00 31.45
ATOM   21367   OH2 WAT   4437     -20.971   -1.223   12.183   1.00 47.05
ATOM   21368   OH2 WAT   4438     -19.674   12.470   63.556   1.00 44.37
ATOM   21369   OH2 WAT   4439      -1.525   40.553   27.756   1.00 41.21
ATOM   21370   OH2 WAT   4440     -18.654    1.585   28.426   1.00 32.42
ATOM   21371   OH2 WAT   4441      17.125    0.453   50.867   1.00 40.97
ATOM   21372   OH2 WAT   4442      46.616  -22.499   -3.435   1.00 40.16
ATOM   21373   OH2 WAT   4443      14.381   25.984   34.791   1.00 37.01
ATOM   21374   OH2 WAT   4444      -1.785  -17.781    2.660   1.00 35.38
ATOM   21375   OH2 WAT   4445     -34.581  -22.257   26.233   1.00 42.91
ATOM   21376   OH2 WAT   4446      24.684   23.141    0.831   1.00 35.73
ATOM   21377   OH2 WAT   4447      15.504    6.715   63.224   1.00 38.96
ATOM   21378   OH2 WAT   4448      19.904   21.033   71.538   1.00 43.76
ATOM   21379   OH2 WAT   4449     -11.227   22.621   -8.864   1.00 27.21
ATOM   21380   OH2 WAT   4450      22.345    0.986   14.851   1.00 34.11
ATOM   21381   OH2 WAT   4451     -10.539  -25.144   27.450   1.00 36.84
ATOM   21382   OH2 WAT   4452      16.140   25.932   32.224   1.00 35.40
ATOM   21383   OH2 WAT   4453      44.961   30.241   15.396   1.00 37.99
ATOM   21384   OH2 WAT   4454      34.177  -25.015   12.520   1.00 36.11
ATOM   21385   OH2 WAT   4455     -20.127  -20.201   41.569   1.00 32.33
ATOM   21386   OH2 WAT   4456       5.429  -56.224   24.411   1.00 42.80
ATOM   21387   OH2 WAT   4457      32.065    2.167   30.883   1.00 43.06
ATOM   21388   OH2 WAT   4458       5.091   42.861    7.752   1.00 39.50
ATOM   21389   OH2 WAT   4459     -21.209  -11.056    5.163   1.00 41.80
ATOM   21390   OH2 WAT   4460      19.803    9.836   20.265   1.00 40.87
ATOM   21391   OH2 WAT   4461      29.343    4.465   26.139   1.00 29.91
ATOM   21392   OH2 WAT   4462      10.788   42.451    0.401   1.00 42.38
ATOM   21393   OH2 WAT   4463      -7.021  -50.881   26.507   1.00 32.87
ATOM   21394   OH2 WAT   4464     -19.249   19.648   45.938   1.00 29.54
ATOM   21395   OH2 WAT   4465      48.159    7.324    9.609   1.00 39.08
ATOM   21396   OH2 WAT   4466       0.381  -40.577    8.688   1.00 37.54
ATOM   21397   OH2 WAT   4467     -25.910  -21.171   45.136   1.00 40.07
ATOM   21398   OH2 WAT   4468     -22.226   -2.802   33.260   1.00 35.07
ATOM   21399   OH2 WAT   4469      -4.952   49.029   23.144   1.00 45.50
ATOM   21400   OH2 WAT   4470      17.417   13.858   -4.051   1.00 38.03
ATOM   21401   OH2 WAT   4471       4.986   16.348  -15.614   1.00 30.12
ATOM   21402   OH2 WAT   4472      15.429  -22.524    1.908   1.00 36.21
ATOM   21403   OH2 WAT   4473      30.126  -47.999   29.175   1.00 23.74
ATOM   21404   OH2 WAT   4474     -19.245    3.242   52.458   1.00 33.15
ATOM   21405   OH2 WAT   4475      41.831   21.851   70.956   1.00 36.15
ATOM   21406   OH2 WAT   4476      25.141  -23.572  -20.451   1.00 35.05
ATOM   21407   OH2 WAT   4477     -23.878    4.412  -11.442   1.00 28.26
ATOM   21408   OH2 WAT   4478      42.991  -24.831   47.594   1.00 35.61
ATOM   21409   OH2 WAT   4479      -7.137   30.657   69.022   1.00 47.25
ATOM   21410   OH2 WAT   4480      17.754    1.462   57.307   1.00 35.59
ATOM   21411   OH2 WAT   4481      -7.414   21.345   -1.587   1.00 30.73
ATOM   21412   OH2 WAT   4482      49.815   21.351   58.077   1.00 37.51
ATOM   21413   OH2 WAT   4483     -15.491   44.459    7.923   1.00 50.41
ATOM   21414   OH2 WAT   4484       4.048  -22.551    5.047   1.00 36.58
ATOM   21415   OH2 WAT   4485      50.672  -12.564   -0.579   1.00 37.00
ATOM   21416   OH2 WAT   4486       2.078  -13.615   27.066   1.00 19.93
ATOM   21417   OH2 WAT   4487      -8.044   32.117   70.958   1.00 27.03
ATOM   21418   OH2 WAT   4488       0.643  -25.729   20.083   1.00 22.99
ATOM   21419   OH2 WAT   4489      17.072   17.442   39.782   1.00 27.80
ATOM   21420   OH2 WAT   4490      39.386  -43.716   22.448   1.00 25.25
ATOM   21421   OH2 WAT   4491      50.725   -6.820   55.355   1.00 43.84
ATOM   21422   OH2 WAT   4492     -19.456   26.078   48.234   1.00 34.33
ATOM   21423   OH2 WAT   4493      29.077  -49.519    9.320   1.00 36.75
ATOM   21424   OH2 WAT   4494       9.459  -18.005    2.269   1.00 34.78
ATOM   21425   OH2 WAT   4495     -19.163   36.702   49.212   1.00 32.59
ATOM   21426   OH2 WAT   4496      16.195    7.713  -20.690   1.00 46.10
ATOM   21427   OH2 WAT   4497      26.413   -5.902   59.650   1.00 37.00
ATOM   21428   OH2 WAT   4498     -22.773   19.390    2.650   1.00 33.05
ATOM   21429   OH2 WAT   4499       1.717  -30.055   70.167   1.00 44.59
ATOM   21430   OH2 WAT   4500     -16.732   24.403   -6.733   1.00 39.96
ATOM   21431   OH2 WAT   4501      46.171  -20.860    3.372   1.00 42.41
ATOM   21432   OH2 WAT   4502       3.145   16.448   33.272   1.00 30.34
ATOM   21433   OH2 WAT   4503       3.333  -30.786   61.572   1.00 33.43
ATOM   21434   OH2 WAT   4504      52.805   18.720   57.784   1.00 39.33
```

```
ATOM   21435   OH2 WAT   4505      31.760 -29.715   16.803   1.00 42.71
ATOM   21436   OH2 WAT   4506      27.158  -0.019   -2.171   1.00 47.55
ATOM   21437   OH2 WAT   4507      16.391  -6.880   13.945   1.00 27.93
ATOM   21438   OH2 WAT   4508     -11.329   8.325   33.144   1.00 35.74
ATOM   21439   OH2 WAT   4509     -34.565 -18.654   31.647   1.00 41.23
ATOM   21440   OH2 WAT   4510       8.119   2.472   45.194   1.00 35.82
ATOM   21441   OH2 WAT   4511      26.135 -26.276    1.441   1.00 43.41
ATOM   21442   OH2 WAT   4512       6.185  13.143   27.534   1.00 38.63
ATOM   21443   OH2 WAT   4513      15.834 -35.849   46.381   1.00 39.03
ATOM   21444   OH2 WAT   4514      52.437  25.745    6.497   1.00 41.04
ATOM   21445   OH2 WAT   4515       5.343   4.118   14.468   1.00 33.27
ATOM   21446   OH2 WAT   4516      53.362   6.451   39.554   1.00 38.27
ATOM   21447   OH2 WAT   4517       1.590  -4.443  -22.357   1.00 33.22
ATOM   21448   OH2 WAT   4518      49.556  -1.588   49.431   1.00 34.00
ATOM   21449   OH2 WAT   4519     -28.945   3.556   61.373   1.00 43.53
ATOM   21450   OH2 WAT   4520     -12.490  17.160   20.670   1.00 39.70
ATOM   21451   OH2 WAT   4521      40.918  -3.831   38.596   1.00 26.45
ATOM   21452   OH2 WAT   4522      10.399  -3.808   63.636   1.00 27.56
ATOM   21453   OH2 WAT   4523      -5.893 -42.115    6.281   1.00 43.08
ATOM   21454   OH2 WAT   4524     -30.106  -0.391   45.625   1.00 36.74
ATOM   21455   OH2 WAT   4525      41.777   0.678  -15.445   1.00 37.86
ATOM   21456   OH2 WAT   4526      14.086  15.973   37.228   1.00 29.86
ATOM   21457   OH2 WAT   4527     -22.519  27.041   47.602   1.00 45.34
ATOM   21458   OH2 WAT   4528     -11.576   3.521  -21.126   1.00 26.78
ATOM   21459   OH2 WAT   4529      -2.842  24.071   13.955   1.00 37.20
ATOM   21460   OH2 WAT   4530      36.314 -37.379    7.290   1.00 36.68
ATOM   21461   OH2 WAT   4531       8.937  41.604   63.559   1.00 44.67
ATOM   21462   OH2 WAT   4532       6.131 -15.555   37.510   1.00 35.99
ATOM   21463   OH2 WAT   4533       2.582 -30.744   64.478   1.00 33.23
ATOM   21464   OH2 WAT   4534      14.122  25.572    3.018   1.00 45.34
ATOM   21465   OH2 WAT   4535      29.990   5.778  -14.327   1.00 46.38
ATOM   21466   OH2 WAT   4536      17.429  -9.357   65.683   1.00 44.69
ATOM   21467   OH2 WAT   4537       6.231 -17.310   74.869   1.00 34.09
ATOM   21468   OH2 WAT   4538      11.057  11.153   65.196   1.00 43.68
ATOM   21469   OH2 WAT   4539     -13.688  21.726   22.028   1.00 48.02
ATOM   21470   OH2 WAT   4540     -31.249  -5.613   11.556   1.00 34.90
ATOM   21471   OH2 WAT   4541      -7.066  28.532   37.518   1.00 37.48
ATOM   21472   OH2 WAT   4542      23.003  24.425   17.044   1.00 35.33
ATOM   21473   OH2 WAT   4543      -3.469  27.584   73.860   1.00 39.05
ATOM   21474   OH2 WAT   4544      35.891  29.059   44.547   1.00 41.31
ATOM   21475   OH2 WAT   4545      18.800  -1.059   10.975   1.00 15.84
ATOM   21476   OH2 WAT   4546     -19.212  -0.670   24.770   1.00 29.47
ATOM   21477   OH2 WAT   4547     -16.028  -8.734  -10.667   1.00 40.15
ATOM   21478   OH2 WAT   4548       5.835 -15.346   20.455   1.00 23.89
ATOM   21479   OH2 WAT   4549      42.287  -4.979   41.504   1.00 27.98
ATOM   21480   OH2 WAT   4550      38.305   9.987   71.347   1.00 48.01
ATOM   21481   OH2 WAT   4551     -11.381  38.933   24.989   1.00 49.32
ATOM   21482   OH2 WAT   4552     -22.300   2.992   33.226   1.00 45.30
ATOM   21483   OH2 WAT   4553       6.931  -6.229   41.554   1.00 41.06
ATOM   21484   OH2 WAT   4554      19.682  -8.377   66.797   1.00 45.95
ATOM   21485   OH2 WAT   4555      36.306 -36.168   62.243   1.00 35.31
ATOM   21486   OH2 WAT   4556      54.304   7.728   12.240   1.00 34.26
ATOM   21487   OH2 WAT   4557     -28.537   7.332   49.621   1.00 40.13
ATOM   21488   OH2 WAT   4558      17.625   9.030   18.391   1.00 42.71
ATOM   21489   OH2 WAT   4559     -12.739  20.162    7.607   1.00 32.46
ATOM   21490   OH2 WAT   4560     -12.182  40.553   51.371   1.00 40.44
ATOM   21491   OH2 WAT   4561      17.431 -17.321   20.994   1.00 19.57
ATOM   21492   OH2 WAT   4562       9.509  14.689   21.947   1.00 18.00
ATOM   21493   OH2 WAT   4563      19.197  17.919   37.745   1.00 39.62
ATOM   21494   OH2 WAT   4564       8.296  41.620   10.968   1.00 40.32
ATOM   21495   OH2 WAT   4565       6.824  16.093  -17.793   1.00 45.81
ATOM   21496   OH2 WAT   4566     -31.651 -18.816    6.729   1.00 45.64
ATOM   21497   OH2 WAT   4567     -12.020  40.602   54.082   1.00 42.65
ATOM   21498   OH2 WAT   4568     -15.024   5.447  -20.431   1.00 37.03
ATOM   21499   OH2 WAT   4569      38.171 -25.627   -5.931   1.00 36.41
ATOM   21500   OH2 WAT   4570      11.961  16.248   26.219   1.00 31.42
ATOM   21501   OH2 WAT   4571      19.997  11.507    0.789   1.00 46.97
ATOM   21502   OH2 WAT   4572     -19.414 -31.785   29.916   1.00 33.12
ATOM   21503   OH2 WAT   4573      30.687  11.177   59.321   1.00 35.02
ATOM   21504   OH2 WAT   4574     -28.171   8.202   -0.223   1.00 45.38
ATOM   21505   OH2 WAT   4575     -23.907  -0.946    0.147   1.00 47.86
ATOM   21506   OH2 WAT   4576      36.420  -9.570  -20.098   1.00 46.95
ATOM   21507   OH2 WAT   4577      -9.302  25.934  -13.864   1.00 17.87
ATOM   21508   OH2 WAT   4578      27.518 -31.859   17.185   1.00 41.07
ATOM   21509   OH2 WAT   4579       9.163  15.018   25.314   1.00 36.50
ATOM   21510   OH2 WAT   4580      20.941  19.630   26.829   1.00 35.95
ATOM   21511   OH2 WAT   4581      29.489  -1.396   -4.410   1.00 31.96
```

```
ATOM   21512  OH2 WAT   4582     33.238  34.672  55.740  1.00 46.22
ATOM   21513  OH2 WAT   4583    -30.816  -5.894  17.338  1.00 49.72
ATOM   21514  OH2 WAT   4584     19.340 -28.094  76.769  1.00 34.85
ATOM   21515  OH2 WAT   4585     -2.179  15.453  30.418  1.00 40.59
ATOM   21516  OH2 WAT   4586      4.279 -17.186  76.947  1.00 48.31
ATOM   21517  OH2 WAT   4587     -0.036 -14.038  25.792  1.00 21.21
ATOM   21518  OH2 WAT   4588     29.067  -1.678   2.086  1.00 24.42
ATOM   21519  OH2 WAT   4589     -5.344  11.926  31.843  1.00 29.45
ATOM   21520  OH2 WAT   4590     -3.000  -4.011 -20.507  1.00 33.38
ATOM   21521  OH2 WAT   4591     16.416 -34.157  13.726  1.00 32.70
ATOM   21522  OH2 WAT   4592     42.496  30.507  62.292  1.00 31.93
ATOM   21523  OH2 WAT   4593     45.544  -3.876   0.068  1.00 37.84
ATOM   21524  OH2 WAT   4594      4.284  25.647  44.152  1.00 46.08
ATOM   21525  OH2 WAT   4595     28.936   0.551 -17.645  1.00 49.26
ATOM   21526  OH2 WAT   4596     28.309  -1.764  -7.219  1.00 34.20
ATOM   21527  OH2 WAT   4597     -0.139  -4.683  -4.704  1.00 40.66
ATOM   21528  OH2 WAT   4598     38.002 -39.295  28.778  1.00 37.91
ATOM   21529  OH2 WAT   4599      1.896 -10.498  26.814  1.00 40.28
ATOM   21530  OH2 WAT   4600     10.875 -31.201  46.215  1.00 46.59
ATOM   21531  OH2 WAT   4601    -17.789  11.593  42.545  1.00 40.33
ATOM   21532  OH2 WAT   4602     13.281 -34.722  45.502  1.00 43.03
ATOM   21533  OH2 WAT   4603     15.546   2.812  48.750  1.00 34.98
ATOM   21534  OH2 WAT   4604    -24.408  -0.962  68.815  1.00 34.14
ATOM   21535  OH2 WAT   4605     27.530   8.533  -3.110  1.00 46.99
ATOM   21536  OH2 WAT   4606     -5.207  -2.672  -4.358  1.00 37.50
ATOM   21537  OH2 WAT   4607     -6.846  -4.949  54.526  1.00 33.19
ATOM   21538  OH2 WAT   4608     -8.773 -28.684  66.448  1.00 41.34
ATOM   21539  OH2 WAT   4609     15.694 -33.293  11.109  1.00 42.89
ATOM   21540  OH2 WAT   4610     25.189   7.699  -4.734  1.00 38.08
ATOM   21541  OH2 WAT   4611    -25.724 -20.312  42.518  1.00 44.59
ATOM   21542  OH2 WAT   4612     30.872 -53.539  20.326  1.00 48.78
ATOM   21543  OH2 WAT   4613      7.005 -17.629   0.602  1.00 47.16
ATOM   21544  OH2 WAT   4614    -20.076  21.041   2.976  1.00 50.56
ATOM   21545  OH2 WAT   4615     49.790  17.372  -5.207  1.00 53.06
ATOM   21546  OH2 WAT   4616     45.033   0.193  -5.524  1.00 36.67
ATOM   21547  OH2 WAT   4617      3.384  12.364  26.877  1.00 47.24
ATOM   21548  OH2 WAT   4618    -23.460 -11.122  39.780  1.00 36.40
ATOM   21549  OH2 WAT   4619     36.510 -18.235 -14.040  1.00 44.41
ATOM   21550  OH2 WAT   4620     27.674  11.270  60.667  1.00 36.19
ATOM   21551  OH2 WAT   4621    -25.671 -31.027   5.734  1.00 35.54
ATOM   21552  OH2 WAT   4622    -33.918 -10.844  11.974  1.00 43.33
END
```

Table 2 Crystallographic data quality, phasing, refinement and model quality

Space group & Cell parameters (Å)	$P2_1$ $a = 87.8$ $b = 155.4$ $c = 209.9$ $\beta = 99.3°$			$P2_1$ $a = 86.1$ $b = 157.2$ $c = 100.2$ $\beta = 97.4°$
Data quality				
Data set	Edge	Peak	Remote	Native
Wavelength (Å)	0.97939	0.97927	0.9393	0.979
Limiting resolution (Å)	3.1	2.8	2.8	1.8
R_{meas} [a]	0.161	0.120	0.131	0.103
$<I/\sigma I>$ (high resolution)	12.8 (2.6)	25.6 (6.0)	13.3 (3.3)	15.9 (2.1)
Completeness	0.994	0.999	1.0	0.94
No. unique reflexions (multiplicity)	100 734 (3.5)	136 609 (10.6)	136 664 (3.3)	229 086 (4.5)
Experimental f'/f'' (electrons) [b]	-9.9 / 2.9	-8.6 / 5.4	-1.3 / 3.2	-

Refinement (40 – 1.7 Å)

		(highest resolution:
R_{cryst} [c]	0.229	0.286)
R_{free} [d]	0.263	(0.318)
No. reflexions: working / test [d]	206 168 / 22 908	
No. atoms (residues)	19 820 (2 640)	
No. waters	1 610	

Model quality

Ramachandran plot: % residues favourable	90.4	
% unfavourable	None	
R.m.s. deviations: Bond lengths	0.006	
Bond angles	1.2	
Dihedral angles	22.1	

[a] $R_{meas} = [\Sigma_h {}_{w}\Sigma_i|<I_h>-I_{h,i}|] / \Sigma_h\Sigma_i I_{h,i}$ where $w = \sqrt{[n_h/(n_h-1)]}$ and $<I_h> = [\Sigma_i {}^n I_{h,i}] / n_h$. This is the multiplicity-weighted R_{symm} [Diederichs, 1997 #155]

[b] Estimates from CHOOCH (Evans, 1999)

[c] $R_{cryst} = \Sigma||F_o|-|F_c||/\Sigma|F_o|$; F_o and F_c are observed and calculated structure factor amplitudes.

[d] R_{free}: cross-validation R_{cryst}, i.e. calculated using randomly selected test data not used in refinement.